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THE UNIVERSITY OF ALBERTA

PHONOLOGY OF THE GALICIAN GERMAN DIALECT OF  
STONY PLAIN, ALBERTA

A THESIS

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by

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## ABSTRACT

This study concerns the German spoken in Stony Plain, a small town twenty-three miles west of Edmonton, Alberta. The settlement was founded in the years 1891-94 mostly by families from Galicia, then part of the Austro-Hungarian Empire. The German speaking population of that province was only a tiny fraction of the whole.

Material for the phonology was gathered chiefly from one informant. Using Standard German as a guide, the writer composed questions to elicit words aimed at covering all phonemes in all positions. Interviews were conducted in German and recorded both on tape and in phonetic transcription. These recordings and others of free conversation were used to prepare the phonological analysis.

Important features of the idiolect are (1) the lack of rounded front vowel phonemes, (2) nasalization, (3) the neutralization of the contrast between initial voiced and voiceless stop phonemes, (4) the occurrence of spirant allophones for the voiced stop phonemes in medial position.

The idiolect appears to be connected with the present-day dialects of Rhenish Frankonian and Swabian.

The influence of English is very strong even in the German of the older folk. Many of the younger generation do not understand the dialect.



## PREFACE

With the mass movement of Europeans to the North American continent and the contact of their languages, the linguist is presented with a complex situation.

This thesis attempts to record just a minute part of the complete picture: it is limited spatially to one small area, chronologically to one point of time, numerically to one principal informant and linguistically to one aspect of her idiolect. Its significance is to be derived ultimately from its relation to the whole.

With the increasing influence of English on other languages spoken on this continent, the task of recording the disappearing tongues becomes urgent, lest (as in the case of Lunenburg German) we are left with nothing but a few peculiarities of the English spoken in the former linguistic islands. With this in mind the present thesis was undertaken.

The writer wishes to express his thanks to all those who have helped him with advice and information, in particular to Mr. and Mrs. Philipp Schütz of Stony Plain and Mr. and Mrs. Henry Werle of Edmonton; also to Dr. E. Reinhold of the University of Alberta, whose guidance throughout has been of inestimable value.





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## CHAPTER I

### HISTORICAL BACKGROUND

#### A. Settlement History

The settlers who founded the Stony Plain settlement came from Galicia, which in the mid-eighteenth century was still a Polish province. At the division of Poland by the three expanding powers: Russia, Prussia and Austria, Galicia fell to the Austrian House of Habsburg.<sup>1</sup> The Empress Maria Theresia and her successor Joseph II welcomed settlement in Galicia from German speaking areas but made no effort to force Austrian culture on the Slavic inhabitants. Indeed, they furthered native Ukrainian and Polish culture.

Philip Schütz, husband of the chief informant, states that his family moved from Germany to Galicia in 1780. This agrees with Thierfelder's conclusion that two waves of immigration took place: between 1781 and 1805, then between 1810 and 1852.<sup>2</sup> The same author finds that Galicia's German population was more richly developed than that of Volhynia. He mentions Western Germany as the origin of the settlers and estimates their number in 1936 as approximately 60,000.

The fact that this is only a small proportion of the total population, may account for the absence of reference to

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<sup>1</sup> See map in Appendix, p.126

<sup>2</sup> Franz Thierfelder, "Deutsche Sprache im Ausland," Deutsche Philologie im Aufriss, ed. Wolfgang Stammeler (Berlin, 1957), I, 1406.



them in general historical studies of the area. Nevertheless, they showed great organizing ability, and shortly before the Second World War there were three German newspapers in Galicia and no fewer than ninety-five schools in which German was the language of instruction, and twenty-seven Polish schools in which it was taught as a foreign tongue.<sup>3</sup> The entire population in the early twentieth century was about seven million, of which forty-five per cent was Polish and forty-two per cent Ruthenian (Ukrainian). Jews numbered 770,000. The population of the capital, Lviv (Lemberg), was 159,000.<sup>4</sup>

In the late nineteenth century thousands of Galician Germans were settling in Canada and the United States. When asked why she left, Mrs. Schütz, the chief informant, stated that her family had been too large for the farm to support, and, since there was no more unbroken land to settle, she decided to emigrate to the New World. We may assume that her case was typical.

German immigration to the Canadian West before 1900 had been generally light, wherefore the appearance of eighty families from Germany and Austro-Hungary at Medicine Hat in 1890 was a significant event.<sup>5</sup> The exact proportion from

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<sup>3</sup> Thierfelder, p. 1406.

<sup>4</sup> These population figures are from the entry under "Galicia," Encyclopedia Britannica, 11th ed. (Cambridge, Engl., 1910), XI, 401-402.

<sup>5</sup> Katharine Schütz was not in this group.





Galicia is unknown. Because the area first intended for their settlement, at Dunmore, near Medicine Hat, proved unsuitable for continued cultivation, the group split up. Some went east to Neudorf in Saskatchewan; some decided to investigate the area around Edmonton. The latter group was moved by the C.N.R. to Red Deer, then the end of steel. From there, harassed by forest fires and slowed down by mud and muskeg, they brought their cattle, farm and household equipment to Edmonton.

Observers were sent out into the surrounding country to prospect for settlement sites. The Reformed Church group decided to homestead in the Beaver Hills district, while the Lutherans, estimated at thirty families, mostly from Galicia, elected to trek westward across the large area known as "Stony Plain."<sup>6</sup> In 1891 homesteads were built in what are now the areas of Spruce Grove and Stony Plain.

The importance of the church in the settlement cannot be overestimated. Church activity was then, and continued to be, extremely lively and was shared in by a very high percentage of those belonging to the Lutheran confession. The people of this faith are now, to all practical intents, identical with the originally German-speaking population of Stony Plain, and the influence and number of any other lin-

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<sup>6</sup> For a map showing places mentioned, see Appendix, p. 127.



guistic group in the settlement until recent times are small by comparison. Therefore, if the following account of the growth of the community reflects largely the history of its Lutheran congregation, it is because the closely associated German element is our primary concern.<sup>7</sup>

The first Lutheran place of worship in Western Canada was a combination of church and parsonage, built in 1892 in Spruce Grove. A dispute arising over the buying of another site for a bigger church, resulted in twenty families being expelled from the congregation, which was attached to the Canadian Synod. It may be that this unfortunate incident was responsible for the growth of two separate centres: Spruce Grove, about twenty miles west of Edmonton, and Stony Plain, some three miles farther on, for at the latter place, in 1894, the rejected families formed another congregation, and a second combination church-parsonage was built there the following year. This time their pastor was from the Missouri Synod.

The Reverend Emil Eberhardt not only held German services in Stony Plain; he also began a school, teaching bible history, reading and writing in German and English. Since he did not feel at ease preaching in English, it is reasonable to suspect that his school was conducted mostly in German. But the pastor had been sent out as a missionary and,

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<sup>7</sup> For some population statistics and comments concerning Stony Plain see Appendix E, p. 128.



in fulfilling his duties in this direction, was unable to teach in the school as often as he would have liked.

More Galician and other German-speaking settlers, some of whom had homesteaded first in Ontario or the United States, swelled the church membership to 571 in 1899.

The liveliness of the community and its willingness to sacrifice can be judged by the fine, expensive church erected in that year. In such a close-knit group the language was likely to be maintained longer than in one with interests outside itself. Its isolation, before the coming of graded road and railway, was also conducive to conserving the German language. Community building zeal was still active in 1904 as seen by the completion of an eleven-room parsonage.

The church was able to release a daughter congregation in 1909 to Golden Spike, a few miles south of Stony Plain, without losing its pre-eminence at home, though a small Methodist congregation in 1907 is evidence of organized Anglo-Saxon activity.

Evidence of the vigour of the German speaking element lies in the development of its Christian Day School. By 1905 it had an enrollment of sixty; in 1909 a qualified, full-time teacher was appointed, and in 1913 a new building was erected, which served the needs of the children until 1954.

Apart from church matters, the next five or six years saw the building of hotels, a bank and a law office. Migration to the Canadian West was in full swing. Land prices were





rocketing because of the flood of settlers, especially from the United States. Approximately 200,000 of them came to Western Canada in 1907. By 1908 the C.N.R. had built its track as far as Stony Plain. This brought a sharp boost to the town's merchants, whose stocks supplied new settlers disembarking at the terminus, headed for land further west.

The fertility of the soil was soon realized. Even in 1893 grains of wheat grown in Stony Plain were exhibited at the Chicago World Fair.

Yet the very commercial success of the community opened the way for an attack on its linguistic character. Good lines of communication are essential to thriving trade. The town's isolation was broken by the coming of the railway, which had linked Stony Plain with either coast by 1911. In these and the following years the building of a permanent road to Edmonton was facilitated by the drainage of the worst of the intervening muskeg. The intercourse made possible by such means of communication led, of course, to an increase in the influence of English on the German language. And, most important, it was in English that all business had to be conducted.

While the adults spoke German exclusively among themselves (English services were not introduced until 1929), they realized that they had to educate their children for life in a predominantly English speaking country where knowledge of only their own language and culture would be insufficient, and therefore appreciated the reasonableness of laws





rejecting German as a language of general instruction. The steady increase in importance of English for the children was greatly accelerated by the outbreak of war in 1914, when public opinion was so strong against German elements in the population that the Provincial Government ordered the Lutheran school in Stony Plain to be closed. The pupils were sent to public schools where they came into closer contact with English, and no doubt felt the suspicion their language aroused in their class-mates. One might conjecture that before long they became infected with the notion that German was in some way inferior and so adopted English enthusiastically. How else can we explain that these youngsters, schooled in those bitter years, became such energetic campaigners in the late 1920's for church services in English?

Nevertheless, the Stony Plain community showed remarkable resilience. In 1921, having obtained legal advice, the congregation reopened its church school. For reasons never satisfactorily explained by the government it was ordered closed. The conviction that injustice had been done was so deeply felt that a committee of three left for Mexico to prospect for a resettlement area. During their absence much effort was made by those at home to obtain satisfaction, but it is thought that only the action of the Mexico committee persuaded the authorities to reverse their decision and allow the school to reopen.

A second school was opened in 1924 to accommodate



growing demand.

Morale was weakened by the financial strains of the thirties followed by a second wave of anti-German feeling accompanying the Second World War. It was not as intense as it had been from 1914-1918 owing largely to a reduced use of German in the community (English services were given twice monthly and increased in 1943 to one a week). In addition, the English radio program, "The Lutheran Hour," gave evidence that this church was as benevolent as any other. It can scarcely be doubted, though, that the long war years brought unpopularity on the German language, accelerating the natural drift to English; and the movement of population, result of both war and earlier economic difficulties, loosened long standing ties in the German-speaking community.

The congregation showed indomitable spirit by the building of yet another school in 1954, which replaced the two existing ones. Grades I-IX are taught, and the 1962 enrollment of 116 represents very nearly one hundred per cent of the congregation's children. German is not taught here and even in the town's High School, this subject is not, at the time of writing, offered.

Today, those people in Stony Plain attached to the Missouri Synod, form only one of the settlement's six congregations but make up three-eighths of the town's population. Taken together with the members of the Canadian Lutheran Synod, they make up half the population.



German is spoken now predominantly by the old folk. Fewer people of middle age use it to one another, and the younger generation, it is said, scarcely understands it. This is, of course, a generalization and as such is liable to be wrong in many cases, but it correctly indicates that as a lively medium of communication Stony Plain German is fading. This study hopes to record its phonology before it disappears.

## 2. Informants

The chief informant, Katharine Schütz, was born in Neudorf, five miles from Strye, Galicia, in 1877. As one of nine children, she was soon obliged to support herself, and after receiving an elementary education, worked as a housemaid from the age of sixteen to twenty.

Then, as an immigrant in Winnipeg, where an uncle worked as an immigration official, she met and married Philipp Hermann, who had come from a German speaking village in Slavonic linguistic territory. The couple rented a farm in Langton, North Dakota, for six years before building a homestead in the Saskatoon area, in which they lived for eighteen years and brought up two children. During this time they lived near other settlers from Galicia and were joined by other members of Mrs. Schütz's family. Next they moved to Saskatoon, where after nine years, Mr. Hermann died. Five years later, in 1944, the informant came to live at Stony Plain as the wife of Philipp Schütz, whom she had known at





school in Galicia.

She has, of course, heard many types of German spoken, but feels that the dialect prevalent in Stony Plain is, apart from borrowings from English, her own native tongue.

Philipp Schütz also gave much help in the collecting of material for the phonology. He was born in Strye, Galicia, in 1874. His schooling was frequently interrupted. He emigrated with his parents to Winnipeg, where his sister was born. This family was one of those at Dunmore that came via Red Deer over the trail to Edmonton; it was also one of the founder families of the Galician settlement and was one of the families expelled from the original congregation in the dispute over purchase of land, hence also one of those that began the thriving community known as Stony Plain.

As a founder member of the church and head of a family with fourteen children, Philipp Schütz has not left the settlement for any length of time and has always been a prominent member of the community. All his children speak German.





## CHAPTER II

### FIELD PROCEDURE

The composition of the questionnaire was inspired in large part by that infinitely fuller and superior one devised for the Linguistic Atlas of New England.<sup>1</sup> Since nothing was known of the dialect in Stony Plain, the investigator was unable to concentrate on words showing clearly any special features. A list of common words was drawn up with the aim of including at least twice every standard German phoneme in every position in addition to common consonant clusters. These words were then grouped according to subjects (in as far as was possible) such as house and home, food, people, church, farming and so on. Questions in German were composed, each one with the aim of eliciting one word in the list, with the exception of a small number intended to elicit anything up to a dozen words, e.g. "Name the month of the year." There were 245 questions in all.

Having made contact with someone familiar with Stony Plain, the writer was taken to see a number of inhabitants of long standing, not only with a view to choosing an informant, but also to become acquainted with local conditions.

The term /'švebiš/ 'Swabian', is used by the German

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<sup>1</sup> Information on this questionnaire is contained in Hans Kurath, Handbook of the Linguistic Geography of New England (Providence, 1939).



inhabitants of Stony Plain to describe their speech. The obvious conclusion is that the original settlers came to a large extent from Swabia, but this is not the case. The term /'švebiš/ and its equivalents are frequently used in German linguistic islands for the local speech, although the settlers come from various parts of the German-speaking area.<sup>2</sup> It gradually became evident that many of the settlers regarded themselves as Austrian and/or Galician, and it was partly this fact that carried the decision on the informant.

Having chosen an informant, the investigator held usually two interviews a week, each of a maximum duration of two hours. The informant's statement that her speech was like most of the others' was in general borne out by the writer's limited experience. However, since some minor differences were observed, the term idiolect is used in this thesis instead of dialect. The decision to use one principal informant was the result of time shortage.

The meetings were held in German. It might be argued that the interviewer's pronunciation could affect that of the interviewee; but the informant was more at ease in her mother tongue and often spoke freely about some topic suggested by the question. These passages were valuable in assessing the naturalness of the single utterances given in

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<sup>2</sup> This is attested by Pavel Breznik, Die Mundart der hochdeutschen Ansiedlung Franztal in Jugoslawien (Halle/Saale, 1935).



direct answer to questions. Such prolonged responses would have been unlikely if the material had been elicited on a translation basis. Furthermore, the informant was aware that the dialect form and not the Standard German form was being sought; she would often contrast the two and on some occasions search in her mind for an expression no longer used in the community. Her husband would also join in the discussion but tended to give Standard German forms, whereupon the informant would immediately draw his attention to that fact.

The place of all interviews was in the Old People's Home in Stony Plain. This was advantageous in that friends often came into the room and joined the discussions raised on the subject of local speech. It afforded also an opportunity of comparing pronunciations and, furthermore, allowed the speakers to forget that the writer was present.

Extensive use was made of a tape recorder, some 7,000 feet of tape being filled. The disadvantages of a tape-recorder are two-fold: it can make an informant feel ill at ease and records nothing of physical movements such as lip rounding. It is also sometimes objected that a recording is acoustically unreliable; but this is simply untrue, unless the apparatus is of inferior manufacture or is being used ineptly. The real obstacles were easily overcome. The informant was more amused than intimidated by the recorder, so that its influence on the atmosphere of the interviews was





beneficial. To ensure that all visible details were recorded, the field worker noted such features as bilabial articulation, lip rounding, lip spreading and lip protrusion with a single symbol and completed the transcription when the tape was played back later. Little transcription was attempted during the interview, for the writer, sensing that tempo and interest lagged while he transcribed, was apt to be too hasty and consequently inaccurate. It was found to be more conducive to natural behaviour if little written recording was carried out in the interview.

A valuable lesson was learned in question phrasing. When a question failed to obtain a quick answer, or failed to elicit anything of value at all, the reason was usually that the conception was too abstract. Several questions were later purposely omitted because of expected difficulty.

When the last question had been dealt with, a rough phonemicisation was begun. About half the material gathered was entered onto cards in such a way that every probable phoneme in every position had a separate entry card. The first draft was then made. Where it needed filling out, or re-investigating, further examples were sought in the second half of the material. As this part of the work proceeded, notes were made of points of doubt, and matter was thus gathered for two or three more interviews: this time the translation method was used because of its faster results. In this way the final version was obtained.





One doubt that dogged the writer constantly was whether he was transcribing the fully natural speech of the informant or a dialect type modified towards Standard German. There is always a tendency among dialect speakers to use standard forms with strangers, because dialect is felt to be more suitable for intimate use and is associated with a restricted area or group of people, and also because the stranger being addressed is assumed to be unfamiliar with local speech. Certainly, these attitudes appeared to obtain during the present investigation, but there was no suspicion of another common difficulty met by field workers, namely, the unwillingness of some informants to admit the use of dialect forms owing to the commonly attached social stigma. If such were the conditions, it is probable that forms given as single-word answers are more reliable indications of the dialect than forms heard in conversation with the writer.



## CHAPTER III

### PHONOLOGY

#### A. INTRODUCTION

1. Division of Speech Sounds. As a general division of speech sounds for the purposes of orderly presentation, three categories have been adhered to: (a) vowels, those sounds which in the present idiolect bear the climax of a syllable when the lexemes in which they occur are spoken with emphasis; (b) consonants, those sounds which under the same conditions as in (a) fall either side of the syllabic climax and (c) consonant clusters. Thus, the term initial applied to a consonant is given the meaning: in word-initial position followed immediately by a vowel; similarly medial means: standing alone between vowels; final must then signify: in word-final position preceded immediately by a vowel.<sup>1</sup>

This three-fold division is, however, not wholly practicable on a phonetic level, for in certain realizations of lexemes nasal and lateral consonants function as vowels, that is, they bear the climax of a syllable. This subject is dealt with more fully later.<sup>2</sup>

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<sup>1</sup> Where a compound consists of two free morphemes, e.g. /'blumən,kaxəl/, the first phoneme of the second element may be considered initial if its realization is typical of initial position.

<sup>2</sup> See page 22.



All realizations of the semi-vowel /j/ fall within the consonant category.

2. Order of Phonemes. The order in which the phonemes are listed is not alphabetical. For the vowels the first phoneme is high front, after which the order descends through the front vowels to low front; then, moving back to include low central and low back, rises through the back vowels to high back. The "schwa" is included at this point, before the treatment of the diphthongs.

For the consonants the order depends on (a) the degree of hindrance to the breath stream, (b) voicing, (c) point of articulation. This means that under (a) stops precede affricates, which in their turn precede spirants; lastly come nasals, laterals and trills. Under (b) within these groups voiceless precede voiced sounds and under (c) where the first two means of ordering do not suffice, a sound articulated forward in the mouth precedes one articulated further back.

This gives the following order:

Vowels: /i/, /I/, /e/, /ɛ/, /a/, /ɑ/, /ɔ/, /ω/, /ω/,  
/o/, /U/, /u/, /ə/;

Diphthongs: /aU/, /aI/, /ɔI/;

Consonants: /p/, /t/, /k/, /b/, /d/, /g/,  
/ts/, /č/,  
/f/, /v/, /s/, /š/, /x/, /h/,  
/m/, /n/, /ŋ/,  
/l/, /r/, /j/.



## B. VOWELS

1. Bases of differentiation. The vowels show a complex based on contrasts in length, tension and height; length is of greatest importance, while contrasts in tension are often blurred by a tendency to laxness, and height is also unreliable. To give an example, what distinguishes /mit/ 'tired' from /mIt/ 'with' is that /i/ is longer, and usually laxer and higher than /I/. Similarly the /e/ of /bedə/ 'to pray' is longer and usually laxer and higher than the /ɛ/ of /bɛtər/ 'beds'. In these two cases length is the basis of the most important acoustic distinction. Less important are height and tension, since low allophones of /i/ and /e/ overlap the higher limits respectively of /I/ and /ɛ/, which are often lax when not in a prominent position in the sentence.

What is true of these front-vowel contrasts is also true of the distinctions /a:/ /a/, /u:/ /U/, /o:/ /ɔ/; but here the feature of rounding also plays a part. Indeed, an essential difference between /a/ in /has/ (I) 'hate' and /a/ in /has/ 'rabbit' is that /a/ is more rounded. It is more retracted, and in a typical realization it also possesses the qualities of greater length, greater laxness, and decreased height as against /a/. Presumably because of the many ways in which /a/ may differ from /a/, and because low back vowels are the most difficult to distinguish acoustically one from another, /a/ has developed a wide range of allophones





in free variation, from low central to low back, and varies also in the degree of rounding.

Moving now to the high back phonemes, we find that both are rounded but that /u/ is more so than /U/. It is also longer, laxer, and higher. No cases were recorded, however, in which two words depended solely on this distinction for conveying different meanings.<sup>3</sup> We have an analogous pair in /šUk/ 'shoe' and /šu/ 'shoes'. The /k/ was never recorded as released; therefore, its acoustic effect is rather to cut off the vowel abruptly, intensifying the vocalic contrast with /šu/, which always has an offglide.

The distinction between /o/ and /ɔ/ is analogous to that between /u/ and /U/, except that /ɔ/ is also more central than /o/. Here too, there is difficulty in finding minimal pairs. Only one was recorded, and that is not a good example: /hols/ 'fetch it' is realized as [ho<sup>o</sup>ɪts] with an excrescent [t], which combines with the following [s] to give an affricate [ts]; phonetically we now have the same consonants as in /holts/ 'wood'. Only /o:/ɔ/ gives them different meanings.

Phonemes /ɔ̃/ and /ɔ̃/ are both nasalized, but /ɔ̃/ alone has phonemic nasalization. They are distinguished also by height, from /o/ and /a/. They are distinguished from

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<sup>3</sup> One could argue from the evidence collected that /u/ and /U/ were positional variants; /u/ appears in open syllables, /U/ in closed. In view of the incomplete evidence, and the type of contrast exemplified by the front vowels, it was decided to regard them as separate phonemes.



/ɔ/ by their nasalization, greater length, greater rounding and decreased tension. The symbols /ɔ̃/ and /ɔ̃/ do not represent two separate phonemes, but one, in which the nasalization is sometimes phonemic as in /štɔ̃/ 'stone', and sometimes non-phonemic as in /tɔ̃n/. Strictly speaking, /ɔ̃/ is two phonemic symbols /, / and /ɔ̃/. The subject of phonemic nasalization is dealt with elsewhere.<sup>4</sup>

2. Length. In designating degrees of vowel length, three terms were found necessary: long, normal, short. The functional contrast is between long on the one hand and normal or short vowels on the other. Phonemically we have, therefore, only two categories: long and normal; the latter was again divided because of the occurrence of a shorter vowel in certain phonetic environments; therefore, instead of positing a separate allophone for each vowel phoneme, it is considered preferable to indicate where short vowels are likely to occur.

We are concerned only with /I/, /ɛ/, /a/, /ɔ/, /U/; other phonemes do not give rise to short vowels. When they occur before /r/ plus a voiceless consonant they are short, e.g. /kurts/ 'short', /hart/ 'hard', /štark/ 'strong'. Here the feature is most marked. Other environments are before /št/, between /š/ and a voiceless stop, and generally before /p/, e.g. /pɔšt/ 'post office', /šIp/ 'shovel', /šUtər/ 'rubble', /tɔp/ 'pot', /tɛp/ 'pots'.

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<sup>4</sup> See pp. 23ff.



There are certain consonants and consonant clusters which, in the evidence at hand, are never preceded by long vowels. These are: /p/, /k/, /ts/, /š/, /x/, /ŋ/, /št/ and /r/ plus a consonant.

When we examine the effect of a following [ř] or [ʁ] upon any given vowel phoneme, we notice that, with some exceptions, there is an allophone before this sound consistently different from most other realizations. With some phonemes the difference is slight and unreliable, and with others marked and regular.

If one takes the allophone as a deviation from the norm, there is a central hub towards which all these movements of deviation tend. Back vowels are centralized and high and mid front vowels are lowered; the position of /a/ is not affected. Here, the low front position, is the converging point of deviations caused by a following [ř] or [ʁ]. The notable allo<sup>o</sup>phonic variants are: [ɛ:] from /i/; [ɛ] from /I/; [æ] from /ɛ/; [ɐ] from /o/.

3. Secondary and tertiary stress. By far the greatest amount of attention has been given to vowels under primary stress. Under secondary stress, vowels tend to show certain features, which are intensified under tertiary stress. Although we are referring here to word-stress, which remains constant for any given word, similar behaviour is noticed under reduced sentence-stress. For example, the /I/ in /'predIx/ 'sermon' has tertiary stress;<sup>5</sup> the /I/ in /In/ 'in' is likely to have

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<sup>5</sup> No symbol is used to indicate tertiary stress.





a similar realization, because the word is usually unemphasized in its sentence.

The effect of tertiary stress on vowels could be dealt with at great length, but for present purposes a detailed examination was not undertaken. The most striking and obvious effect is that of shortening and laxening. The vowel phonemes /I/ and /ε/, both tense in syllables with primary stress, are found in /'naIdIx/ 'angry' and /fε'brɔx/ 'broken' slightly reduced in length and considerably in tension.

Loss of length is more noticeable in the long phonemes. Thus, /du/ has [u:] or [u:<sup>ə</sup>] under primary stress; under tertiary there will be no offglide and the vowel will be normal or short in length: /,ven du mir 'helfšt/ 'if you help me' has [du], i.e. the vowel has lost in length.

In another recording of the same lexeme /du/, another important characteristic of tertiary stress is featured: centralization. A schwa represents the phoneme /u/. Lastly there are cases where /ə/ is reduced to zero.<sup>6</sup>

4. Vocalic consonants. Nasal and lateral consonants also serve on occasions to bear the climax of a syllable with tertiary stress. In phonemic transcription examples are obscured because a schwa always precedes the vocalic consonant. This is done because there is no phonemic difference between [əm]

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<sup>6</sup> See /ə/ in the list of phonemes. Page 67-68.





and [m] or any other such pair. Sometimes the [ə] is present, sometimes absent; therefore, unless we posit a phoneme /ə/ which may be realized as zero [Ø], there will be occasions when a vowel [ə] is heard, for which there is no explanation in the phonemic transcription.

Examples are as follows:

/m/ /UnIx dɛm altə hun/ 'under the old hen'  
[UnIxdm<sup>?</sup>aldə hu:ən]

/n/ /'hibən Unt 'dribən/ 'here and there'  
['hI<sup>^</sup>ybm n 'drI<sup>^</sup>ybm]

/'blumən,kaxəl/ 'flower pot'  
['blu:mŋ,kaxəl]

/l/ /'bɪsəl/ 'bit' (in the phrase a bit cold)  
['bɪsl]

5. Nasalization. The feature of nasalization is caused by a dropping of the velum, allowing air to pass through, and vibrate in, the nasal cavity. In the case of [m], [n], [ŋ], oral occlusion is complete and all the expelled air leaves by the nose. When vowels are nasalized, the air stream splits up at the velum, some of it passing through the nasal cavity and the rest through the mouth.

In the idiolect under discussion, especially in less meticulous speech, an /m/, /n/, or /ŋ/ is frequently anticipated, causing the velum to drop while the vowel preceding the nasal is still being pronounced.

Some of the cases where this feature was clearly audible are listed below:



[hɪ̃ˈɪən] /hin/ 'hens'  
 [řɪ̃nt'] /rInt/ 'head of cattle'  
 [šdɪ̃ŋə] /štɪ̃ŋkə/ 'to stink'  
 [sɪ̃ŋə] /sɪ̃ŋə/ 'to sing'  
 [drɪ̃ŋə] /trɪ̃ŋkə/ 'to drink'  
 [ksɪ̃ŋs] /gsɪ̃ŋs/ 'singing' (pejorative)  
 [hɪ̃ˈŋkl̩] /kɪ̃ŋkəl/ 'chicken'  
 [řɛ̃ːnə] /renə/ 'to rain'  
 [bɛ̃ŋk] /bɛ̃ŋk/ 'benches'  
 [gədɛ̃ŋə] /gədɛ̃ŋkə/ 'to remember'  
 [bɛ̃ŋk] /bɛ̃ŋk/ 'bench'  
 [šˌɛ̃ŋk] /šrank/ 'cupboard'  
 [mɛ̃n] /man/ 'man'  
 [řɪ̃pːːm] /ram/ 'cream'  
 [hɛ̃n] /han/ (I) 'have'  
 [tɛ̃sən] /tsən/ 'fence'  
 [ˈoːmɛ̃nts] /ˈo,ments/ 'ant'  
 [ɫɪ̃ŋ] /lɪ̃ŋ/ 'lung'  
 [dʊ̃n] /tun/ (they) 'do'

The phonemes /n/ and /ŋ/ cause greater nasalization than /m/. Similarly diphthongs, back vowels and long vowels more readily accept nasalization than front vowels or vowels of normal or short duration.

Nasalization may be present in a vowel when no nasal follows:

[řɛ̃ː] /re/ 'rain' (noun)  
 [šɛ̃ː] /še/ 'fine' 'nice(ly)'



[ba:<sup>o</sup>] /ba/ 'railway'

[šo:] /šo/ 'already'

[hI<sup>^o</sup>] /hi/ 'down' (adverb)

[da<sup>±</sup>] /daI/ 'your' (sing. fam.)

Alternative forms were heard which contained a final /n/. Forms without /n/ are likely to be encountered in rapid speech rather than in words uttered singly.

e.g. [šo:n] /šon/ 'already'

[da blaŋk Isšo vIdər gəbrox] 'that fence is broken again'

[še:n] /šen/ 'fine', nice(ly)

[da fo: hat še: gsUŋ] 'the bird sang nicely'.

Clearly, if a pair of words exists in which the only difference between them is in nasalization, then this feature would be phonemic. A minimal pair does exist in: [du:ə], alternative form of [du:<sup>o</sup>n] /tun/ (they) 'do' and [du:ə] from /du/ 'you' (sing.fam.). Though such pairs are infrequent, there is reason to posit for this idiolect a phoneme of nasalization /,/.

Nevertheless, the acceptance of this phoneme raises a problem. Consider the following forms of the same lexeme, /tun/ 'to do':

(a) /t/ plus /u/ plus /n/

(b) /t/ plus /u/ plus /,/

(c) /t/ plus /u/ plus /,/ plus /n/

Since /t/ and /u/ are common to all three realizations and since all three are equal in meaning then

/n/ = /,/ = /,/ plus /n/

This is clearly impossible. Again, taking a



phoneme to be the smallest speech unit capable of making a change in meaning, let us remove /, / from form (c) above. We obtain an acceptable form of the same lexeme; we have not changed the meaning. Therefore, nasalization is not a phoneme in this and similar cases.

Let us now consider /št<sub>ω</sub>/ 'stone'. Its realization is usually [šd<sub>ω</sub>:<sup>ə</sup>]. Without nasalization, the vowel would fall either to the /o/ or the /a/ phoneme, which would either make another word or nonsense; in either case the sense is changed, proving nasalization to be phonemic. A clearer case is provided by [šde:<sup>ə</sup>] 'stones': remove the element of nasalization and we are left with [šde:<sup>ə</sup>] which phonemically equals /šte/ (I) 'stand'. In these two cases an /n/ is never present so the nasalization from a phonological point of view cannot be proved a realization of /n/, although we know from historical evidence that an /n/ was once present.

We therefore have two types of nasalization: phonemic and non-phonemic. The phonemic type is never followed immediately by another nasal sound; the non-phonemic type may or may not be followed immediately by such a sound. The latter type poses a problem in that the nasalization, when not followed by a nasal consonant, has the ability to change meaning without being a phoneme, for [du:<sup>ə</sup>] means 'you' and [d<sub>u</sub>:<sup>ə</sup>] means 'to do'.

To solve this difficulty, we must regard as full phonemes /, m/, /, n/, /, ŋ/. Any one of these may be represented allophonically by nasalization alone, by nasal consonant alone,







or by both elements. However, this is a cumbersome device when it comes to be written, and nasalization is so common in this idiolect that we may write simple /m/, /n/, /ŋ/, bearing in mind that these consonants may be preceded by nasalization that is not phonemic. Thus [du:<sup>ə</sup>] is /du/, and [du:<sup>ə</sup>] is /tun/, but for [šd<sup>ə</sup>:<sup>ə</sup>] the phonemic transcription is /št<sup>ə</sup>/.

Nasalization usually occurs as a phoneme with /<sup>ə</sup>/, but other cases are also recorded, e.g. /tse/ 'teeth'.

### C. CONSONANTS

1. Stops. If we take a series of words which in Standard German begin with a voiceless stop, we find that the corresponding words in the idiolect under examination have often a weakly voiced lenis stop.<sup>7</sup> Conversely, Standard German initial voiced stops are reflected by stops only weakly voiced. Although /p/, /t/, /k/ are not voiced in every case, it is clear that this idiolect does not use a phonemic distinction in initial position based on the presence and absence of voicing; nor is there any evidence of phonemic aspiration or tension. The fact that voicing is not always present in initial /p/, /t/, /k/ does not prevent their contrast with /b/, /d/, /g/ from being neutralized, since it is now totally unreliable as a guide to meaning.

There is, therefore, a difficulty in assigning any

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<sup>7</sup> This tendency is strongest in the case of /t/ which nearly always is voiced: [d]. The least affected stop is /k/, but even here the contrast /k:/g/ is not dependable.



initial stop to the voiced or voiceless phoneme. To secure reliable results, the investigator would have to obtain several examples of every word in question. If there were found a variation between voiced and voiceless in the stop of one word, then this stop would be assumed to be from the voiceless phoneme. If the stop were constantly voiced, it would belong to the voiced phoneme. But this is a long process; let us consider another possibility.

Since the contrast between the voiceless and voiced stops is largely neutralized in initial position, there should be in a strictly synchronic and non-comparative study a symbol to represent a bilabial stop, voiced or voiceless, and symbols likewise for the dental and velar stops. This would necessarily be our course of action, if we were transcribing a language hitherto unrecorded, but it is a pointless encumbrance when dealing with a dialect of one of the world's leading languages. In this study, therefore, we shall use standard German as a guide to transcribe phonemically initial /p/, /b/, /t/, /d/, /k/, /g/, at the same time making quite clear that voicing in this position does not act phonemically.

The release of stops in final position follows no definite pattern but it can be said that emphasis laid on the word in question is likely to result in release; the desire for clarity will have a similar effect. In normal speech, on the other hand, articulation finishes with the occlusion in very many cases.



The medial allophones of the voiced stops are either stops or spirants. Their occurrence is governed in the following way: after a long vowel or diphthong and usually after a normal vowel the spirant is heard; for example, /gedə/ 'to weed' is [ge:də]

/plaUdəre/ 'to chat' is [plaUdəre]

/šIdə/ 'to pour' is either [šIdə] or [šIdə]; after a normal vowel and before a vocalic consonant, the stop occurs; for example, normally

/hIbəl/ 'hill' is [hIb<sub>l</sub>].

If, however, the /ə/ is realized (normally its realization here is zero), then the /b/ is released into the /ə/ instead of the /l/ and a spirant may be produced. Therefore,

/hIbəl/ is [hIb<sub>l</sub>] or [hIβəl] or [hIbəl].

No examples of /d/ plus vocalic consonant were recorded, and only one with /g/. Furthermore, with medial /g/ there is a strong tendency towards evanescence: [ɣ]~[j]~zero

2. Affricates. Of the three affricates inherited from the High German Sound Shift, only /ts/ appears in this idiolect. It is no surprise not to find /kx/, since this is restricted to a small part of the German-speaking area. Forms such as /ɛpəl/, /kəp/, /damp/, /paIf/, /klɔpə/ ('apples', 'head', 'steam', 'pipe', 'to knock') make one suspect that if /pf/ does occur, it is due to the influence of Standard German. Two occurrences were noted, but neither was native to the idiolect: /štopfə/ 'to darn' was given as the word used now,





whereas earlier /fɪlkə/ was used; the other case concerns /'ɛrt,apfəl/ 'potato', which was said to be the term used by the Jews in Galicia, the other German speakers using /'grUm,berə/.

Of [ts] there is abundant evidence, but from a phonological point of view, the question arises whether to regard it as a sequence: /t/, /s/, or as a phoneme /ts/. There is one fact to be considered in favour of the latter solution: the components of the affricate each act differently from their corresponding phonemes /t/ and /s/. The [t] of the affricate is never voiced, neither is the [s]; the latter component is more fortis than the phoneme /s/, and it appears before /t/ which is atypical for this idiolect, in which /št/ is customary; for example, the third person singular present tense of /sɪtsə/, /šprɪtsə/ ('to sit', 'to spray') is /sɪtst/, /šprɪtst/; finally we observe that the component [t] is sometimes very weakly articulated in initial position, which is not true of /t/ leading any cluster. For these reasons /ts/ is regarded as a phoneme.

A problem is posed by such words as /vɪrts,haUs/ 'inn'. Do we have here /ts/ or /t/ and /s/? On a strictly phonological examination, the investigator would be obliged to obtain the isolated forms /vɪrt/ 'landlord' and /haUs/ 'house' before coming to the conclusion that the /s/ is in this case a bound morpheme. However, from historical and grammatical knowledge of the language, he may reduce his





labours, for the conclusion is foregone: we are dealing with a sequence /t/, /s/.

Care should be taken, nevertheless, to distinguish a phonemic from a phonetic affricate. In /'vIrts,haUs/ we have a stop released into the homorganic spirant; this is phonetically an affricate. Is it, however, phonemically a unit? No, it is two functional units: /t/, /s/. This is not the same as the affricate in, for example, /aʔsəl/ 'magpie' from which no forms such as /at/ or /səl/ can be obtained, because the [t] and the [s] belong to the same functional unit /ʔs/.

A further recorded example of a phonetic affricate which is not phonemic is [,holtser'aUs] 'fetch it out', in which the [t] is excrescent.

Of less frequent occurrence is the affricate [tʃ]. The voiceless, palato-alveolar stop is released into the homorganic fricative. We have here to decide, as in the case of [ʔs], if we are dealing with a phonemic affricate or a sequence of phonemes /t/, /ʃ/. We shall consider the following points:

(a) No allophone [tʃ] of /t/ is recorded (unless we accept [tʃ] as a sequence).

(b) No examples are divisible into elements of a compound in such a way that the stop is separated from the spirant.

(c) There is no suggestion where [tʃ] is final that [ʃ] is a bound morpheme.



(d) The affricate [tʃ] can be regarded as slow release of the stop [t] and hence as one unit of speech sound. To take a contrasting example, [ʃ] and [t] in [ʃt] are separated by a change in point of articulation and are, therefore, two units of speech sound.

Conclusion: [tʃ] is a phoneme. We shall indicate the phoneme by the symbol /č/.

3. Spirants. The subject of contrast between voiced and voiceless spirants deserves some attention. As we have seen, the contrast /t:/d/, /p:/b/, /k:/g/ in initial position is lost, and in a dialect serving a dwindling proportion of a community for only part of its everyday needs, in a dialect, therefore, with a relatively small vocabulary, such contrasts are likely to be of low yield.

The same is true of the spirants, among which only initial /f:/v/ can produce changes in meaning: /fɛrt:/vɛrt/ 'horse': 'worth'; /fɔrt:/vɔrt/ 'away': 'word'. The contrast [s]:[z] is altogether unproductive, and /š/ has no voiced counterpart. In the borrowed word /'tɛləvɪʃn/ 'television', an English [ʒ] has been replaced by the voiceless [š] - an unconscious adaptation of the term to its new milieu. A voiced [h] was recorded in [ksʊnd'hæɪt] /gəsʊnt,hæɪt/ 'health', but no phonemic importance attaches to this. A voiced velar spirant which is sometimes heard for intervocalic /x/, has identical articulation to that of some realizations of intervocalic /g/ but lexemic coalescence is hardly possible, for, except in a very limited number of cases, /x/ is preceded by normal vowels and diphthongs, while /g/ follows long vowels.



If this is so, then we may speak of [j̥] and [ɣ] being in mutually exclusive environments with [ç] and [x]. The voiced pair occurs after long vowels intervocalically; the unvoiced pair after normal vowels and diphthongs. It would appear then, that we have here allophones of one phoneme. What then, if it exists, are the other realizations of this phoneme? Initially, the only possibility is a velar stop: either [k] or [g]. Since /k/ occurs regularly as a stop in all positions, [g] is likely to be our choice. For the same reason the final allophones must be [ç] and [x]. This gives us the following pattern for this phoneme /g/.

Initially: [g]  
 Medially: [j̥]~[ɣ] after long vowels;  
                   [ç]~[x] after normal vowels and diphthongs  
 Finally: [ç]~[x]

However, there are objections to this proposal if we consider the problem in a larger context. Consider the following table showing all stop phonemes at the left and in three columns the various positional realizations.

	<u>Initial</u>	<u>Medial</u>	<u>Final</u>
/p/	[p]~[b]	[p]	[p]
/t/	[t]~[d]	[t]	[t]
/k/	[k̥]~[k]~[g̥]~[g]	[k]	[k]
/b/	[b]	[b]~[β]	-
/d/	[d]	[d]~[ɗ]	-
/g/	[g̥]~[g]	[g̥]~[g]~[j̥]~[ɣ] <sup>7</sup> [ç]~[x]	- [ç]~[x]

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<sup>7</sup> Evidence for [g] rests on [roŋ<sup>N</sup>] 'rye'. See page 75 (footnote).





Phonemic patterns tend to show regularity. Let us examine the above system with this in mind. The contrast based on voicing is neutralized in initial position by a tendency to voice all initial stops, and in final position by the voicelessness of all final stops. The presence of spirant allophones of /g/ among the final stops impairs the regularity of the system.

A greater disturbance is caused by the medial allophones of /g/. Phonemes /b/ and /d/ are realized by a medially voiced stop (sometimes after a normal vowel and regularly before a vocalic consonant) or a voiced spirant (in other cases). If we accept the evidence of [rɔg<sup>N</sup>ɲ], then we have a voiced stop and a voiced spirant for /g/ also; but for this phoneme we have, in addition, voiceless allophones [ç] and [x]. This again breaks the regularity of the allophonic pattern.

For these reasons the voiceless allophones of /g/ as proposed, will be considered as belonging to another phoneme /x/.

	<u>Initial</u>	<u>Medial</u>	<u>Final</u>
/g/	[g]	[g]~[ɣ]~[ɟ]	-
/x/	-	[ç]~[x]	[ç]~[x]

The point of articulation of /x/ varies widely and is not restricted to one of two points for any one allophone. /Ix/ 'I' is well onto the hard palate; /maxən/ 'to make' has a spirant articulated around the margin of the soft and hard palates, while /lɔx/ 'hole' and /bUx/ 'book' terminate in



clearly velar fricatives.

4. Laterals. The lateral continuant [l] is in many languages an unstable sound; we speak of a "dark" or "clear" [l]. For the dark or velarized [ɫ] in this idiolect, the apex of the tongue is turned up to touch the back of the teeth or gingival region, the blade lies low, and the dorsum of the tongue is raised towards the velum. Except for the raised apex, this position is similar to that for [u].<sup>8</sup> This would account for the difficulty in detecting an [ɫ] in [ma<sup>U</sup>ɫ] 'mouth'.

For the clear [l], the blade is raised, the dorsum lowered and the tongue root moved forward. It is now understandable why front vowels have the effect of producing a clear [l] and back vowels a dark [ɫ]. The low front [a], however, also produces velarization; this is because the blade of the tongue is depressed for [ɫ] in anticipation of, or as after effect of, that vowel. Similarly, under the influence of [ə], the blade for producing [ɫ] will be in mid position instead of raised. Just as the acoustic effect of velarized [ɫ] is not far removed from [u], so some realizations in this idiolect of the clear [l] were at first mistaken by the investigator for [ɔ]. The main difference between the two sounds results from lateral release as against apical or laminal, because the volume of frictional sound in [ɔ] is low

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<sup>8</sup> H.H. Wängler. Atlas deutscher Sprachlaute (Berlin, 1958), p. 32.



5. Trills. Another unstable sound in many languages is [r]. In this idiolect /r/ is basically an intermittent stop, i.e. a trill, though frequently the apex of the tongue performs only one or two of the vibratory cycles giving the allophone [ʀ]. Other realizations do not resemble a trill at all. These are fricatives, frictionless continuants or off-glides produced as the articulators move in the direction necessary for a fully trilled [ř], without reaching the end of those movements. These allophones are specified later.

The instability of /r/ is demonstrated clearly by its frequent zero allophone before consonants: /varm/ 'warm' can be [ʁa:m], /fort/ 'away' usually is [fɛřt], and many more examples could be given.<sup>9</sup> Since a greater muscular exertion is required for [ř] than for other speech sounds, an anticipatory tensing of the vowel preceding is usually noticed, even when the /r/ is not articulated, and a consonant following /r/ in the same syllable in a cluster is frequently made more fortis.

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<sup>9</sup> Another indication of the instability of /r/ is given by three words which in Standard German end in /r/; these are: /sɛlbət/ 'self' (German selber), /řtopat/ 'stopper' (German Stopfer) and /řpaIxət/ 'loft' (German Speicher). If we can assume a change to have occurred beginning [r] and ending [t], then it may have been caused partly by final devoicing and partly through the acoustic affinity of [ʀ] and [t]. A related phenomenon is identification by speakers of American English of British English [ʀ] as in ['tɛ,ʀIbɫ] with [d].





#### D. CLUSTERS

When we examine the groups into which consonant clusters might fall, we notice two features related to their occurrence which help to classify them. First, it is seen that any one cluster is rarely observed both before and after the climax of its syllable.<sup>10</sup> We may, therefore, assign any one to a pre-climax or post-climax class. Our second division concerns all clusters; there are three possibilities: a cluster may be found (a) only within the boundaries of a syllable, (b) only straddling boundaries, (c) both entirely within, and elsewhere <sup>r</sup>straddling boundaries. All clusters entered in the list will be grouped according to these two means of classification.<sup>11</sup>

Clusters have been given more space than is customary in such a study as this. The detail allows the reader to see at a glance what are the phonetic and positional peculiarities of any given cluster listed, and, to a lesser extent in a survey of this size, to estimate its frequency. Since certain clusters are typical of a certain language, it is important that the subject receive more than passing attention.

Although clusters are listed in this study in a similar way to the segmental phonemes, it is not to be thought that they are such. They are, of course, sequences of phonemes.

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<sup>10</sup> There is one exception in this idiolect: /št/.

<sup>11</sup> See pages 87-100.





The examples of clusters do not show every possible combination in the idiolect. Although certain parts of the questionnaire were devoted to eliciting words with specific clusters present, no effort was made to be exhaustive. Therefore, the examples illustrate to a large extent the commonest in occurrence. This means, furthermore, that freakish clusters resulting from the juxtaposition of independent lexemes have not been considered. It is worth noting, however, that in such cases there is a tendency to reduce some of the phonemes to zero; thus, /'drUftsu,sɛt̥sə/ 'for sitting on' becomes [ 'drUfsə,zɛt̥sə] and /,du'slɔfšt,nɔx/ 'you're still asleep (2nd pers. sing.) [,du'šlɔ:fš,nɔx] and /va,rum'redšt-,du,nIt/ 'why don't you speak? (2nd pers. sing.) becomes [,vɤUm'redšt',nIt'].

Genuine double consonants do not occur in this idiolect, but we may observe what happens when by chance two identical phonemes are juxtaposed. /'varm,maxə/ 'to make warm' is such a case; the juncture between the two /m/'s is determined by the syllabic division: we have /+/ juncture. The first syllabic impulse finishes while an [m] is being produced, and the second impulse begins without a complete break in that production; phonetically we have [m+m]. An analogous situation occurs in /flaššnaps/ 'bottle of "schnapps"'.

When two similar stops come together, we have a different set of circumstances. Let us consider /ɛr'haUt ,drUf/ 'he hits it'. Here the syllabic division again falls

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between the two phonemes in question, but the first is realized not as a dental stop but as a glottal stop; phonetically we have: ['ha<sup>u</sup>?<sub>+</sub>,drUf].

The neutralization of the contrast between initial voiced and voiceless stops also holds for clusters.<sup>12</sup> Phonetically, /'grUm,berə/ 'potatoes' and /krUm/ 'c<sup>r</sup>ooked' have initial clusters which do not differ materially from one another.

Clusters beginning with /r/ are of frequent occurrence and may be presented in the following way: /r/ plus voiceless stop. These clusters occur in one syllable after the climax and also bridging two syllables. In the latter case the stop is sometimes voiced.

/r/ plus voiced stop. These clusters occur bridging two syllables.

/r/ plus affricate. These clusters occur in one syllable after the climax and also bridging two syllables.

/r/ plus voiceless spirant. These clusters occur in one syllable after the climax and also bridging two syllables. In the latter case the spirant may be voiced.

/r/ plus voiced spirant. These clusters occur bridging two syllables.

/r/ plus nasal. These clusters occur in one syllable after the climax and also bridging two syllables.

/r/ plus lateral. Occurrence as with /r/ plus nasal.

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<sup>12</sup> This neutralization is discussed on pp 27-28.



In all these cases the muscular tension needed for [ř] or [ʁ] affects the other member of the cluster, unless the syllabic division falls between the two; the effect is that of increasing tension to fortis.

The /r/ is realized as [ř], [ʁ], [r], [ə], [ɐ], [ø]. Let us regard these values as representative of an infinite number of possible realizations. Just as we may divide a foot into twelve inches, the allophonic range of /r/ is here divided into six parts. The allophones which appear under emphasis resemble [ř] at one end of the scale; the allophones which appear under no emphasis resemble the vocalic or zero type. It should be noted, however, that [ø] is rare after a long vowel, whereas the schwa realization is common in this position.

E.g. /gartə/ is usually [ga<sup>ə</sup>tə] but

/fort/ is usually [fɛ<sup>ə</sup>t']

In cases where a stop or spirant precedes an /r/ in a cluster, there is no effect: /praɪs/ is usually [praɪs] /krants/ is usually [krants] and so on. The stop remains lenis.

In the list of words containing the phonemes /i/ and /I/ were certain cases where the allophones before [ř] and [ʁ] were in lower mid-front position, [ɛ]. As we have seen, the allophones of /r/ are frequently vocalic or zero. When this happens in a word such as /vɪrtshaʊs/ 'inn', the /I/ allophone is not [ɛ] but [ɪ]. This applies not only to





lexemes containing clusters, but also /ir/ 'you' (formal) and /mir/ 'we', which are either [ɛ:ř], [mɛ:ř] or [i:̞] [mi:̞].

Where there is a zero allophone of /r/, it is usually found that the vowel besides being tense, is also shorter than normal. Thus, /fɔrt/ becomes [fɔ̞t], /hart/ [hɔ̞t], /'vɪrts-haʊs/ ['βɪ̞ts,haʊs].

When voiceless stop or voiceless spirant phonemes occur after /r/ in a cluster, they are less likely to be voiced than in clusters with other voiced sounds. Hence, there is a probability that, for instance, the contrast /kɛrpər/ 'body': /kɛrbə/ 'baskets' will, in addition to the final /r/, also have [p]:[b] or [β].

#### E. PROSODY

1. Stress. The marking of stress is done in the following manner: primary stress - the mark is above the line and precedes the syllable as in /fɛ'brɔx/ 'broken'; secondary stress - the mark is below the line and precedes the syllable as in /'naxt,aɪl/ 'night owl'; tertiary stress - the mark is omitted.

It should also be noted that /ə/ always occurs under tertiary stress; therefore, in such cases as /maxə/ 'to make', /plaʊdərə/ 'to chat', there is no need to mark the remaining syllable, because it must be primary. Every word as a single utterance must have primary stress somewhere.

Several patterns of stress may be discerned. They are listed below.

(a) A monosyllable as a single utterance has primary



stress, which is normally not indicated because this stress invariably appears on such monosyllables.

Examples: /švax/ 'weak', /fis/ 'feet'  
/ku/ 'cow', /bɛt/ 'bed'.

(b) A very common stress pattern is set up by two-part compounds, the first element of which has adjectival function and the second substantival. The compound has two syllables, the first under primary, the second under secondary stress, thus: '-----,-----.

Examples: /'špɛk,maUs/ 'bat'; /'ma,ve/ 'stomach ache'  
/bUx,sak/ 'satchel'; /'ku,kalp/ 'female  
calf'; /'vIrts,haUs/ 'inn'; /'šaf,kɔp/  
'idiot'; /'grap,lɔx/ 'grave'.

Other compounds also have this pattern: /'ur,laUp/ 'leave',  
'furlough'; /'kUk,rUɛs/ 'corn on the cob'; /'ɛsaI,dUŋ/ 'newspaper'.

(c) An even more common pattern is primary followed by tertiary stress, thus: '---- ----.

Examples: /kIpɛl/ 'top', 'peak'; /platsə/ 'to burst';  
/'švebIš/ 'Swabian'; /mɛrxjə/ 'fairy story';  
/'fertIx/ 'ready'; /mɛnər/ 'more'; /'honIx/  
'honey'; /plapɛrt/ 'chatters'.

(d) Let us now consider another type of compound, one in which two elements are present and in which the first (as in (b)) has adjectival force and the second substantival. This time, the first element has two syllables like the entire lexeme in (c); the second element has secondary stress as in (b), thus: '---- ----,-----.



Examples: /'brədər,tʃɔn/ 'wooden fence';

/ 'blankə,tʃɔn/ 'wooden fence'; /'kesə,brot/  
'cheese sandwich'; /'lebəns,laʊf/ 'course  
of life; /'abənt,məl/ 'communion'.<sup>13</sup>

Other compounds are also represented: /'ɛstə,rɑɪx/ 'Austria';  
/ 'aʊsgə,mæxt/ 'put out' (past part.); /'mɪsgə,bɜrt/ 'dwarf'.

(e) An extension of type (d) can be obtained, if the second element has two syllables, like the first, thus:

'---- ----,---- ----.

Examples: /'blumən,kaxəl/ 'flower pot';

/ 'kɪnər,vɑtʃə/ 'to baby-sit'

(f) Another group of two-part compounds has the first element consisting of one syllable under primary stress and the second element of two syllables, the first under secondary, the third under tertiary stress, thus '----,---- ----.

Examples: /'ʊm,laʊfə/ 'to run around'; /'ʊf,ʃtaɪə/

'to get up'; /'fɔrt,farə/ 'to drive away',

'leave'; /'vaɪn,traʊbə/ 'grapes'; /'ʃu,mæxər/

'shoemaker'; /'grʊm,bərə/ 'potatoes';

/ 'mɔɪ,kɛbər/ 'maybug'; /'ʃraɪp,təbəl/ 'hand-  
bag'.

(g) There is a further group of words of three syllables having the first under primary and the others under tertiary stress, thus: '---- ---- ----.

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<sup>13</sup> Used only in the phrase: /'haɪlɪgə 'abənt,məl/, lit. 'holy supper'.



Examples: /plaUðərə/ 'to chat'; /rapələ/ 'to rattle'  
 /fakələ/ 'bunches of straw for roof making';  
 /hɪŋkəlɪxjə/ 'hen(s)' (dimin.); /hɛbəlɪxjə/  
 'cup'; /gUmərə/ 'gherkins'; /nUmərə/ 'numbers'  
 /pɛdɪgər/ 'preacher'.

These seven groups illustrate a characteristic feature of the stress of this idiolect (shared with Standard German), namely: heavy stress precedes lighter stress.

In the following, examples are given where this feature is not present.

(h) Past participles of verbs which do not begin with /g/ or /k/ and of verbs having the prefix /fɛ/ have the stress pattern: ----'----, i.e. the first syllable under tertiary and the second under primary stress.

Examples: /gəʃlaf/ 'slept'; /gəvarnt/ 'warned';  
 /gəplatst/ 'burst'; /gətrəmt/ 'dreamt';  
 /fɛbrɔx/ 'broken'; /fɛklɔpt/ 'battered'.

(i) Another group begins like (h) but adds another syllable at the end under tertiary stress, thus ----'---- ----.

Examples: /gəʃɪxtə/ 'story'; /təsəsamə/ 'together'  
 /gədənke/ 'to remember'; /bəgrabe/ 'to bury'.

(j) A group of words of non-Germanic origin begin with secondary stress, rise to primary and finish with tertiary, thus: ,----'---- ----.

Examples: /,sɛp'tɛmbər/ 'September'; /,ɔk'tobər/  
 'October'; /,no'vɛmbər/ 'November';  
 /,dɛtɛsɛmbər/ 'December'; /,fran'tsesɪʃ/  
 'French'; /,kɪ'nesər/ 'Chinaman'.





(k) A smaller group is similar to (j) but lacks the final syllable, thus ,----'----.

Examples: /,fran'tɛsɔs/ 'Frenchman'; /,aU'gUʃt/ 'August'

(l) Another small group shows the pattern:

,---- ----'---- ----.

Examples: /,gɛlɔ'ribə/ 'carrots'; /,kɔlɔ'rabə/ 'turnips'.

(m) Finally, two examples found, had unique stress patterns: /,aUgən'blik/ 'moment' and /gɛsUnt,haIt/ 'health'. We may note, however, that the former was not used but understood by the informant, while the latter usually loses the first syllable when realized: ['ksUn,dʰa<sup>±</sup>t] (cf. type (b)).

Groups (j)-(m) are characterized by foreign words or few examples, so that we must regard secondary stress in initial position as atypical. The majority of words begin with primary stress, and an important minor group has the first syllable as a prefix with tertiary stress.

No indication was found that a change in stress could change the meaning of an utterance in anything but emphasis.<sup>14</sup>

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<sup>14</sup> In Standard German stress change can alter meaning. Such pairs of words as /,vider'holen/ 'to repeat' and /'vider,holen/ 'to bring back' demonstrate this. The writer searched in vain for such distinctions in the idiolect under examination.



2. Intonation. Intonation is capable of changing the meaning of an utterance and is regarded as phonemic, but we should keep in mind that the word meaning has a broad semantic spread. When we speak of an exchange of phonemes in a minimal pair bringing about a change of meaning, we normally understand that the referend or dictionary definition of the one will not suit the other.

An example to demonstrate that a change of intonation can produce this kind of change in meaning is the following pair of sentences:

Where<sup>3</sup> are you going next year<sup>1</sup>, Vir<sup>1</sup>giniã<sup>1</sup>?

and

Where<sup>3</sup> are you going next year<sup>1</sup>? Vir<sup>1</sup>giniã<sup>3</sup>?

Even here it is likely that in the second sentence a bigger break will occur before Virginia, but this is not vital to convey the required sense. Although no such pair of sentences was recorded in our idiolect, there is no doubt that intonation could be made to function in the same way.

We must accept, however, that intonation normally indicates the attitude of the speaker to his topic, or, for example, whether he is making a statement or asking for information.

All that the present examination undertakes is to set out the commonest patterns and indicate what the hearer is thereby given to understand.



Opinions differ as to the number of pitch levels necessary adequately to record the infinite variation of the voice.

For present purposes we shall adhere generally to the three level system. It is sometimes necessary to posit a very high level, pitch level four, which is concerned with expression of greater emotion or emphasis. In addition, where necessary, intermediate levels will be indicated by the use of plus signs.<sup>15</sup>

Terminal contours will be indicated by numerals denoting change in pitch level.

Sentence stress will be shown on the same line as the intonation. The symbol /' indicates the main sentence stress at the centre of intonation as well as the next most prominent syllable; /' indicates the third most prominent. Each macrosegment will have at least one syllable marked /'. If other syllables are by comparison insignificantly emphasized, no stress symbol is placed on them.

The division of one macrosegment from another is marked by the symbol /|/, which appears in the same line as the intonation.

In phonetic or phonemic transcription /|/ denotes a slight pause in speech, while /||/ is used for a longer break.

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<sup>15</sup> There is no confusion here with the symbol used for open juncture, +, because the two always appear in different contexts. One is always preceded by a pitch level numeral; the other appears in phonetic or phonemic transcription.





Common stress patterns are as follows:

(a) An utterance with no particular element emphasized has an arch-like intonation: the pitch rises and falls. Thus to a question about a pencil lying on a chair, the informant answered:

$\backslash$        $\nearrow$       3      3       $\nearrow$   
 2      3      3      3      1  
 /ɛr laIt Uf dem štul/  
 'It is lying on the chair'

Or to a question about a hen:

$\nearrow$        $\backslash$        $\backslash$        $\backslash$        $\backslash$   
 2      3      3      2      1  
 /das hɪŋkəl let ɔIə/  
 'The hen lays eggs'

Or describing what a teacher does to lazy pupils:

$\nearrow$   
 2      3      2  
 /ɛr haUt si/  
 'He beats them'

(b) Above we have an example which takes us on to a selective function of intonation: /haUt/ 'beats' is not only at the climax of intonation, but is also the kernel of the message. In any utterance, a particular element may be emphasized by making it occur at a climax of intonation (/anəršt/ 'differently').

$\backslash$        $\nearrow$        $\nearrow$   
 1      1      2      1      1      1      1      1  
 /ɛs mUs anəršt gəmaxt verdə/  
 'It must be done differently'

If into the normal rise and fall of an utterance with no emphasis outside its own key word we insert another climax, we automatically pin-point the hearer's attention on this. In the following sentence, /vəIs/ 'know' is the key word in the unemphatic utterance; /aləs/ 'everything' is



the recipient of the second climax:

1    2        1    2 1  
 /Ix vaIs nIt aləs/  
 'I don't know everything'

Analogous is the function of the intonation in the following sentences:

2    3        2    3        1  
 /Ix krik kaI lUft nIt/  
 'I get no 'air' (i.e. I find difficulty in breathing)  
 2    3        2    2    2    2    31  
 /der vɔlf sItst In saInər hel/  
 'The wolf sits in his lair'

(Here we see a drop over a large range on one syllable).

(c) Although an 'arch' of intonation is basic to statement utterances, the climax of intonation does not fall at random at any spot, but on the key word, so that the important element is accented. If the same word is picked out for special emphasis, then the rise and fall of pitch will be greater than normal.

The following utterance needs at least four pitch levels if we are to indicate the greater range of pitch it possesses over others, although three would be sufficient to indicate all but the intensity of the meaning. The informant relates how a woman once asked her how her potatoes were growing, but used a term for potato unknown to informant. The latter replied, therefore, that she had none, to which the response was:



41|2 3 2 | 2 3 1  
/ja ir hapt ja | Im gartə/

'Yes you certainly have...in the garden.'

(d) In the following sentences three pitch levels are sufficient. When the climax falls on something other than a noun, pronoun or verb (i.e. possible key words in any utterance), then the hearer has no doubt as to the emphasis.

2 2 2 2 3 2 2 21  
/der blaŋk Is šon vIdər gəbrəx/

'The fence board is broken again'

The emphasis is on /vIdər/ 'again'.

2 2 2 3 2 2 2 21  
/Ix han dIx šon laŋ nIme gəsin/

'I haven't seen you for a long time'

(e) In the following sentences, the climax falls on a noun, which besides being a key word, receives emphasis also on account of its importance in answering the questions put to the informant. The three-level system is inadequate to show this, but the greater rise to the climax would be evident to a hearer. At the same time the pitch does not range so widely as in the /ja/, for which we postulated a fourth level.

2 2 2 3+1  
/das Is ə bUx/

'That's a book'

2 2 2 3+ 2 2 2  
/si maxən špas ibərdas/

'They joke about it'

2 2 2 2 3+1  
/das sin di ,kar'təfəln/

'They are potatoes'

This last example illustrates that when a polysyllable takes



the climax of intonation that climax occurs on its syllable with primary stress.

(f) Past participles and infinitives often take a climax:

2 2 2 2 2 2 31  
/fi'laIxt hat ɛr tsu lan gəʃlaf/  
'Perhaps he slept too long'

In the following sentence, the sense required that /aUx/ 'also' be emphasized; there is an infinitive in final position, at which the pitch is not so high as at /aUx/.

\ 2 3+ 2 2 3 1  
/Ix kan aUx nIx gut ʃnaUfə/  
'I can't breathe well, either'

(g) Up to now we have considered the selective function of intonation; this is one way in which the speaker expresses his feelings about his topic. The following sentences illustrate how a falling intonation expresses lack of interest or displeasure:

3 2 2 2 2 1 1  
/Ix han das nɛt gəglIx haIt/  
'I didn't like that today'

3 2 2 1 | 3 2 2 2 1 1  
/Ix bIn ʃon mit | Ix glɔIx ,nI'me tsu gUkə/  
'I'm tired. I don't want to look anymore'

If, instead of the fall at the end of the utterance, the voice is raised, this destroys the air of finality and leaves an impression of uncertainty:

\ 2 2 3 2 3  
/das kan 'meglIx sIn/  
'That might be true'





(h) The 'arch' which is basic to all these intonation patterns has had its turning point higher in pitch than its extremities.

There is one recorded example of an inverted-arch intonation for a statement:

1 2 2 2 2 3 3 2 2 1 2 1 2 2 2+  
/Unt dan haben mir Unəʁ gants In das lɔx fəIər gəmaxt/  
'...and then we made a fire right down in the hole

Something like the inverted-arch intonation is found in each item of a list. For example, the informant was asked to give some boys' and girls' names:

1 2 | 1 2 | 1 2  
/ˈaɪdəm pɛdər 'joɦan/

(i) Where we normally find an inverted arch, is in commands:

3 2 3 | 2 1 2 3 1  
/ɡɛn mal raʊs | In di frɪs lʊft/  
'Just go outside...into the fresh air'

2 2 1 3 | 2 2 2 3 1  
/ʃtɑɪ mal ʃɒn ʊf | ɛs ɪs halp axtə/  
'Get up' 'It's half past seven'

2 2 2 2 2 3 2 3 1  
/maxən aɪx mal ə bɪsxjə kalt/  
'Go and cool yourselves off a little'

Except in the command, closely followed by an explanatory sentence (It's half past seven), or by an enlargement of the command (into the fresh air), the last syllable of high pitch contains a sharp drop also. This is in keeping with the function of a final pitch drop in indicating finality.

A command of a more imperious nature has a steadily falling intonation but does not cover as wide a



range as that for indicating lack of interest; also, the pace of the utterance is more decided and forceful.

<sup>´</sup>3   <sup>´</sup>3   <sup>´</sup>3   2   2   2 | <sup>´</sup>3   2  
 /helf ə bIsxjə nɔx dɑ | šlafnɛt/  
 'Help a bit, there!      Don't sleep!

(j) We can often put into the grammatical form of a question an expression of disapproval, for instance, in which case the intonation will express disapproval and not interrogation.

"What do you think you're doing?" demands an apology rather than a concise description of an activity. Thus, the following utterance, grammatically a question, does not have question intonation, but that of a statement.

<sup>´</sup>2   <sup>´</sup>3   2   2   2   1 1  
 /vas plaUdəršt du dɑ vIdər/  
 'What are you talking about over there?'

(k) The genuine question intonation is of two types:

- (i) in questions requiring an answer yes or no
- (ii) in questions requiring more detailed information.

For (i) the intonation rises at the end of the utterance:

<sup>´</sup>2   <sup>´</sup>2   <sup>´</sup>3  
 /so maInšt du/  
 'Is that what you mean?  
<sup>´</sup>1   <sup>´</sup>2   2   2   33  
 /kənt ɛr dɑs fɛštɛə/  
 'Can you understand that?  
<sup>´</sup>2   2   2   2   32 | 23  
 /hɑIt vɑrs 'tsImlɪx gut nɪt/  
 'It was pretty good today, wasn't it?'



For (ii) the intonation rises and falls at the end of the utterance; it may begin with a slight drop:

2+ 2 2 2 2 2 3 2  
/vi lán sɔlst du das Imər nɛmɔ/

'How long are you going to be taking this?

2 2 3 2 | 2+ 2 2 2 3 2  
/,Káta'rɪna vi sɪn bɑɪ aɪx di knʊlən/<sup>15</sup>

'Katherine, how are your potatoes coming on?'

2 2 3 2  
/vɛm sɑɪ bu/

'Whose boy?'

(1) Lastly, examples of utterances which fall into two sections. The intonation rises before the break.

2 2 3 2 2 2 3 | 2 2 2 2 3 2 2  
/vɛn mir brɔt hɑbən ɡɛbakt | hɑbən mir ɐ kɪtʃ ɡɛbrɑɪxt/

'When we baked bread, we used a "kitsch".

2 2 2 3 | 2 2 2 3 1  
/vɛn du mir hɛlfst | dɑn ɪs ɛs bɛsɛr/

'If you help me it'll be better"

2 3 | 1 1 1 2 1  
/hɛr ʊf | du kɑnst nɪx fɑrɐ/

'Stop! you can't drive'

3. Juncture. When we examine an utterance of more than a few syllables, we are bound to notice that the transition between the segmental phonemes varies. Hocket illustrates this excellently with the pair night rates and nitrates.<sup>16</sup> The /t/

<sup>15</sup> The usual term for potatoes is /'grʊm,bɛrɔ/

<sup>16</sup> Charles F. Hockett, A Course in Modern Linguistics (New York, 1958) pp. 54-55.





and /r/ of the former are said to stand in "open juncture". Since we have a change of referend, juncture is phonemic in English.

Juncture is either open or close. Therefore, if we have a symbol for the one, the other can be taken as understood. The commoner of the two is close, so let us symbolize the open type with the customary /+/.

A good example showing a change of juncture bring about a change of meaning was not found in the present idiolect, but let us consider the term /'vaI,naxtə/ 'Christmas'. This has /+/ between /aI/ and /n/. If we instead place /+/ between /n/ and /a/, we obtain the meaningless sequence of lexemes /vaIn/ 'wine' and /axtə/ 'eight'.

An interesting point is raised by the following pair: (a) /ɛr tut saI ʃUk krigə/ 'He is getting his shoe' and (b) /ɛr tut saI sUk rixə/ 'He is smelling his shoe'. The /g/ of (a) is likely to be [j] and the /x/ of (b) to be [ç], but both phonemes in this position are recorded as [j]; furthermore, final unreleased stops appear to be glottalized. We may, then, have the following realizations:

- (a) [ɛ dut saɪ̥ ʃUk<sup>??</sup>+kɪ̥<sup>??</sup>I<sup>^</sup>i<sup>^</sup>jə]
- (b) [ɛ dut saɪ̥ ʃUk<sup>??</sup>+ɪ̥<sup>??</sup>I<sup>^</sup>i<sup>^</sup>jə]

In spite of the prolonged [k]-articulation inevitable in (a), the distribution of /+/ is of paramount importance in the acoustic distinction between (a) and (b). What is noteworthy is that /+/ is brought about by a glottal stop which we must, then regard as an allophone of /+/, which we shall



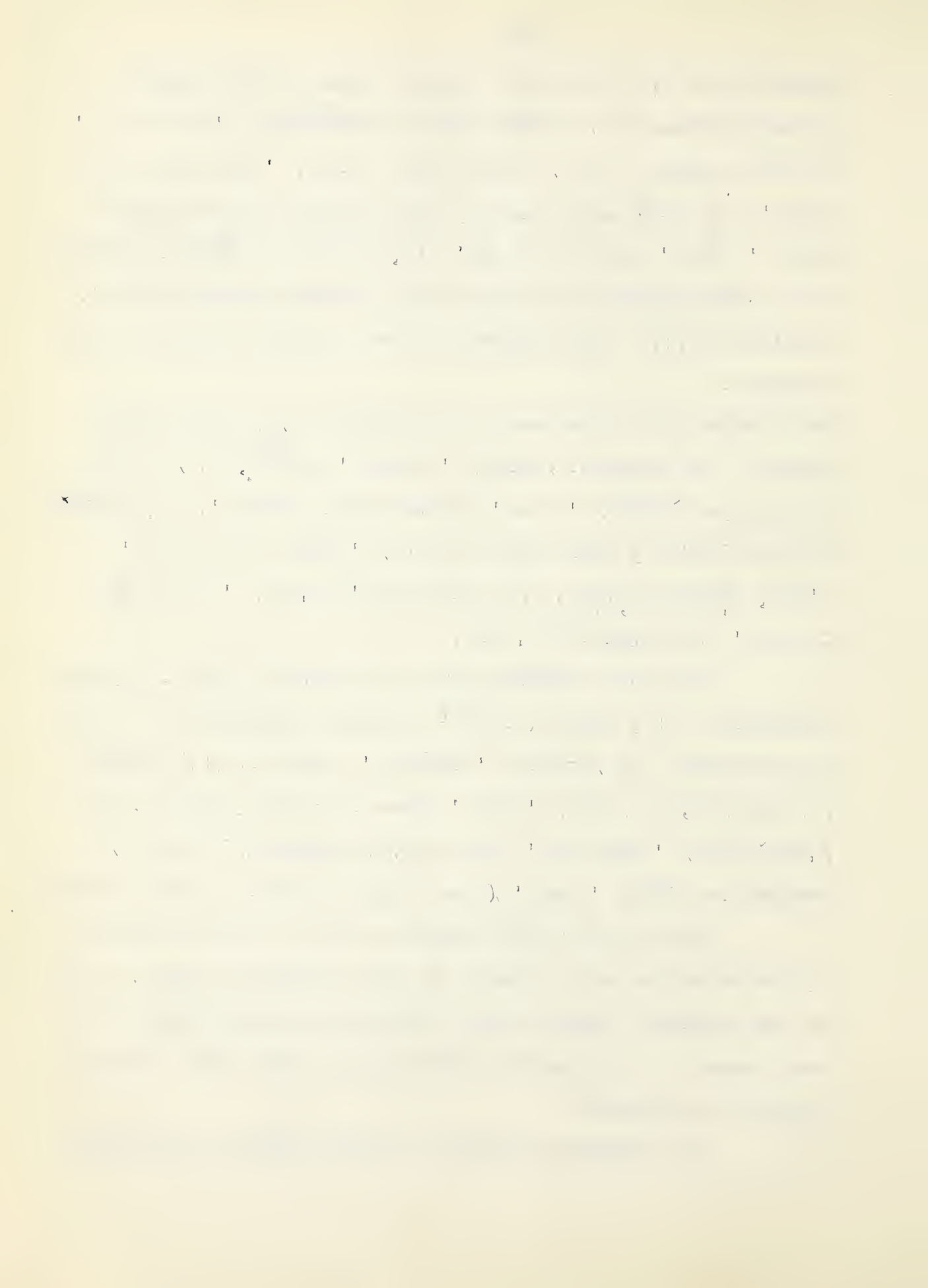
symbolize as [ʔ]. We have a similar case in the example already discussed: /er haUt drUf/ [e ha<sup>U??</sup>t<sup>+</sup>drUf] 'he hits it'. Further examples are: /da nemt man ə mesər/ 'then you take a knife', [da nem<sup>?</sup>t<sup>+</sup>man ə mesər]; also /ix han das net gəglIx haIt/ 'I didn't like it today' [I<sup>^</sup>ç han das ne<sup>??</sup>t<sup>+</sup>gəglIx ha<sup>e</sup>t']. In all these cases a voiceless stop phoneme precedes the /+/ realized as /ʔ/. This appears to be a regular feature of the idiolect.

The glottal stop functions as a variant of /+/ also before vowels. For example: /maI a/ 'my eyes' [ma<sup>±?</sup>t<sup>+</sup>a>ə]; /ix kan aUx nit gut šnaUfə/ 'I can't breathe well either'. [iç kan<sup>?</sup>t<sup>+</sup>a<sup>U</sup>nIt gut šnaUfə]; /UnIx dɛm altə hun/ 'under the old hen' ['UnIç dɛm<sup>?</sup>t<sup>+</sup>alɛ hu:ən]; /In dɛr altə 'kan,tɾi/ 'in the Old Country' [In dɛ<sup>?</sup>t<sup>+</sup>alɛ 'kan,tɾi].

On other occasions /+/ is a break or drop in speech production: [+], which (like [ʔ]) occurs typically at a syllabic division. In /toxtər/ 'daughter', there is /+/ between /x/ and /t/; in /naxt/ 'night' there is close juncture. In /,frIš 'lUft/ 'fresh air' there is /+/ between /š/ and /l/, whereas in /šlaf/ 'sleep' (noun) there is again close juncture.

Up to now we have spoken only of juncture between syllables either with primary or with secondary stress. Let us now consider combinations involving tertiary stress. In such cases it is often more difficult to judge what kind of juncture is present.

(a) Between syllables in which schwa is juxtaposed



with a consonant, which is in a syllable under primary or secondary stress. Juncture: close.

Example: /hat er tsu laŋ gəšlaf/ 'he slept too long' [had ~~ətsə~~ laŋ gəšla:f]. The [d] and [ə] and the [ə] and [l] have close juncture.

(b) Between a syllable under primary or secondary stress ending in a consonant, and a syllable under tertiary stress beginning with a consonant. Juncture: usually open.

Examples: /ə kič gəbraɪxt/ 'used a 'kitsch''. The juncture between /č/ and /g/ is open. /vem saɪ bu/ 'whose boy?' [ve:m za, bu:ə]. The juncture between /m/ and /z/ is open. /oštərə/ 'Easter'. The juncture between /š/ and /t/ is doubtful. These segments belong to different syllables which suggest /t/, but to the ear there appears to be no junctural discrepancy between /oštərə/ and /pošt/ 'post'(office) which is one syllable and therefore must have close juncture. Hence, we conclude that /oštərə/ also has close juncture.

(c) Between tertiary stresses bringing a schwa into juxtaposition with a consonant. Juncture: close.

Examples: /rapələ/ 'to rattle'; /plaUdərə/ 'to talk'. The consonants between the schwas are in close juncture.

/hat er ~~tsu~~ laŋ gəšlaf/ 'slept too long' [had~~ətsa~~laŋ gəšla·f]. The affricate [ts] is in close juncture on either side.

(d) Between tertiary stresses bringing consonants into juxtaposition. Juncture: difficult to judge; probably varies.



Examples: /'plaUdəršt du/ 'Are you talking?' (2nd pers.sing.) [bla<sup>U</sup>dəršdə]. Comparing the juncture of [š] and [d] with that in [šdω] 'stone', one hears a more open juncture in the former. Hence, we conclude that /+/ is present in [bla<sup>U</sup>dəršdə].

/anəršt gəmaxt/ 'done differently' [anəršgəmaxt]. There is doubt as to the juncture between [š] and [g] which cannot be clarified by reference to a word in which [šg] appears in one syllable, because no such word has been recorded. It is probably /+/. /In di ,frIš'1Uft/ 'into the fresh air'. If we compare the juncture between /n/ and /d/ in the example with that in English end, there is no obvious difference. Because end is monosyllabic, its last two consonants must be in close juncture. Hence we conclude that /n/ and /d/ in /Indi/ are also in close juncture.





# F. TABLE OF PHONEMES

## 1. Vowels

i		u
I		U
e		o
ɛ	ə	ɔ
a	ɔ	ω
	a	

## 2. Diphthongs

aU    aI    ɔI

## 3. Consonants

	<u>Bilab.</u>	<u>Lab.-</u> <u>Den.</u>	<u>Alveol.</u>	<u>Pal.-</u> <u>Alv.</u>	<u>Velar</u>	<u>Phary.</u>
stops	p   b		t   d		k   g	
affricates			ts	č		
spirants		f   v	s	š	x	h
nasals	m		n		ŋ	
laterals			l			
trills			r			

## 4. Supra-segmental phonemes

(a) Stress: /ˈ/, /ɪ/, /ˈ/, /ˈ/.

(b) Intonation: /1/, /2/, /3/, /4/

(c) Juncture: /+/.

## 5. Nasalization /,/.



## G. LIST OF PHONEMES AND ALLOPHONES<sup>17</sup>

All the following description refers to the forms found occurring as single utterances or under emphasis, unless otherwise stated. When these forms occur in unemphasized positions, changes are likely to take place. The changes are discussed above (p. 21.).

### 1. Vowels and diphthongs

/i/ This high front vowel occurs in all positions. Longer and laxer than /I/.

[I<sup>^</sup>i:] Beginning from a lower high front position, this allophone decreases in tension and increases in height.

/glider/ 'limbs'; /tsigəl/ 'tiles'; /fireə/ 'four' /brif/ 'letter'; /gisə/ 'pour'; /rixə/ 'to smell' /krigə/ 'to get'; /mit/ 'tired'; /papiə/ 'paper'; /liə/ 'to tell lies'; /fligə/ 'to fly'; /bibəl/ 'Bible'; /ist/ 'east'.

[I<sup>^</sup>i:ə] As above, but with a final offglide.

/fis/ 'feet'; /štrigəl/ 'curry comb'; /sit/ 'south'; /fil/ 'much'; '/mi/ 'trouble', 'hardship'; /knin/ (we) 'kneel'.

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<sup>17</sup> In the margin between oblique strokes //, is shown the phoneme; in square brackets to the right of the margin are phonetic symbols indicating typical realizations of the phoneme.

In the examples where the stress pattern is obvious, stress marks have been omitted, e.g. /rixə/ must have the first syllable with primary stress and the second with tertiary, because every word as a single utterance will have primary stress on one of its syllables, and because the schwa may only take tertiary stress.



[I<sup>^</sup>y:] Same as above but becoming rounded in assimilation to the following [β], a bilabial voiced spirant.

/ibə/ 'to practise', 'over'; /,da'dribə/ 'over there';  
/ ,gələ'ribə/ 'carrots'; /'hibən Unt 'dribən/ 'here and there';<sup>18</sup>

[ɛ:] ~ [i:] Lower mid, tense long varying with high front.

The first allophone occurs before [ř] or [ʃ], the second before [r] or vocalic realizations of /r/.

/ir/ 'you' (formal address); /mir/ 'we'.

In the following only [ɛ:] [ɛ:] was recorded. The first allophone occurs before [ř] or [ʃ]; the second before [r] or vocalic realizations of /r/.

/tir/ 'door'; /šmirə/ 'to spread' /na'tirlIx/ 'of course'.

[i] High front, lax.

/'ju:li/ 'July'; /'ju:ni/ 'June'; /'kan,tri/ 'country'.

/I/ This lower high front vowel does not occur finally.

Shorter and tenser than /i/

[I] ~ [I] ~ [ĩ] The shorter allophone occurs before voiceless stops.

/sIfər/ 'heavy drinker'; /sIbə/ 'seven'; /šIdə/ 'to pour';  
/gə'šIXtə/ 'story'; /'hIbəl/ 'hill'; /kIpəl/ 'peak', 'top';  
/'mIlIx/ 'milk'; /kInər/ 'children'; /UnIx/ 'under';  
/Is/ 'is'; /krIk/ 'jugs'; /bInə/ 'to tie'; /In/ 'in'.

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<sup>18</sup> Realized as ['hI<sup>^</sup>ybm, 'drI<sup>^</sup>ybm].





[Y] ~ [ɣ] A rounded allophone is sometimes caused by a partial assimilation to a following bilabial stop or spirant. This allophone is also somewhat centralized.

/ʃɪp/ 'shovel'; /tʃvɪbələ/ 'onions'.

[ɛ] ~ [ɪ] Lower mid, tense, normal length. Occurs as an allophone of /ɪ/ before [ř] or [ʃ].<sup>19</sup>

/kɪrx/ 'church'; /'fɪrtsɪx/ 'forty'; /'vɪrts,haUs/ 'inn';  
/bɪršt/ 'brush' (noun); /bɪrštə/ 'to brush'; /gəhɪrn/  
'brain'; /kɪrš/ 'cherry'.

/e/ This higher mid front vowel occurs in all positions.  
Laxer and longer than /ɛ/.

[ɛ:] ~ [ɛ:ə] ~ [ɛ:ˆ] ~ [ɛ:ˆə] The mainly random variation in the realization of this phoneme is between a maximum and minimum of tongue height: [e] [ɛˆ]; and also between the presence and absence of an off-glide. However, the offglide is observed much more frequently in monosyllables than in polysyllabic words.

/bes/ 'bad', 'wicked'; /kes/ 'cheese'; /negəl/ 'nails';  
/ve/ 'pain'; /lep/ 'lion'; /'špet,jar/ 'autumn';  
/fə'tselə/ 'to tell', 'relate'; /el/ 'oil'; /'brədə,tʃwɪn/

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<sup>19</sup> See page 40 for discussion of allophone before non-trilled realizations of /r/. In these examples, only /'vɪrts,haUs/ was ever recorded without [ř] or [ʃ], and hence is the only example with the allophone [ɪ].



'wooden fence'; /let/ 'lays'; /'šve,bIš/ 'Swabian';  
/klevə/ 'to stick'; /'evIx/ 'eternally'; /'knebəl/ 'club',  
'cudgel'; /štelə/ 'to steal'; /šver/ 'heavy', 'difficult';  
/'predIx/ 'sermon'; /tse/ 'tough', 'toe'.

With nasalization:

/tse/ 'teeth'.

/ɛ/ This lower mid front vowel does not occur finally.

Shorter and tenser than /e/.

[ɛ]~[ɛ̘]~[ɛ̘̘] The shorter and retracted allophone occurs  
before /p/.<sup>20</sup> The laxer allophone occurs before  
nasals and laterals.

/ɛš/ 'ashes'; /sɛksə/ 'six'; /fɛlt/ 'field'; /šɛnə/ 'to  
scold'; /vɛšə/ 'to wash'; /ɛlfə/ 'eleven'; /štɛmps/  
'stamps' (postage); /'prɛdIɣər/ 'preacher'; /ɛpəl/ 'apples';  
/tɛp/ 'pots'; /šɛp/ 'crooked'; /šɛpə/ 'to shovel';  
/kɛp/ 'heads'.

[e^]~[ɛ̘]. An allophone slightly lowered by a following  
[ř] or [ɹ] to a tongue height between lower-mid  
and higher-low.

/šɛrbəl/ 'piece of broken glass or pottery', 'shard';  
/mɛrts/ 'March'; /ɣɛršt/ 'barley'; /kɛrpxjə/ 'little  
basket'; /vɛrfə/ 'to throw'; /šɛrfə/ 'to sharpen';  
/kɛrl/ 'fellow', 'chap'; /ɛrpsə/ 'peas'; /kɛrbəs/  
'pumpkin'.

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<sup>20</sup> See discussion of length on p. 20.



/a/ This lower front vowel does not occur finally. Tenser and shorter than /e/.

[a]~[ǎ] The shorter allophone occurs before /r/ plus voiceless consonant.<sup>21</sup>

/vasər/ 'water'; /saxə/ 'affair'; 'business'; /salts/ 'salt'; /axtə/ 'eight'; /bax/ 'river'; /habər/ 'oats'; /habə/ 'saucepan'; /alə/ 'all' /samlə/ 'to collect'; /'bUx,sak/ 'satchel'; /armə/ 'arm'(dat.); /laxə/ 'to laugh'; /karə/ 'car'; /maxə/ 'to make'; /štark/ 'strong'; /hart/ 'hard'.

/ɔ/ This higher low advanced back vowel does not occur finally. Tenser and shorter than /a/. Slightly rounded.

[ɔ]~[ǔ] The shorter allophone occurs before voiceless consonants.<sup>22</sup>

/vɔl/ 'wool'; /knɔxə/ 'bones'; /rɔgən/ 'rye'; /nɔx/ 'still', 'yet'; /ɔks/ 'ox'; /dɔktər/ 'doctor'; /'plat,kop/ 'bald head'; /klɔpə/ 'to beat', 'knock'; /štɔpət/ 'stopper'.

[ǐ]~[ǔ<] low advanced central varying with low retracted central. The vowel is tenser and shorter than [ɔ] and appears before /št/ and /r/ consonant.

/pɔšt/ 'post'(office); /mɔšt/ 'cider'; /ɔštərə/ 'Easter';

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<sup>21</sup> See discussion of length on p. 20.

<sup>22</sup> See discussion of length on p. 20.



/dɔrf/ 'village'; /vɔrt/ 'word'; /štɔrk/ 'stork';  
/mɔrdɔr/ 'murderer'<sup>23</sup>; /kɔrp/ 'basket'; /nɔrt/ 'north'.

/a/ This low central to low back vowel occurs in all positions. Longer and laxer than /a/. Lip rounding is more pronounced in the low back allophone: [ɒ].

[a:] ~ [a:ə] ~ [ɒ:] ~ [ɒ:ə]. The central rounded vowel is more common than the back rounded. The offglide is more common in monosyllables than in polysyllabic words.

/šaf/ 'sheep'; /gartə/ 'garden'; /fɔrt, farə/ 'travel away'; /tak/ 'day'; /bɛgrabə/ 'to bury'; /grabə/ 'ditch'; /štralə/ 'beams' (of light); /gar/ 'done' 'cooked' 'var' 'was'; /'šraIp, tabəl/ 'handbag'; /jar/ 'year'; /frage/ 'question'; /drat/ 'wire'; /has/ 'rabbit'; /šlafšt/ 'sleep' (2nd pers. sing.); /rap/ 'raven'; /a/ 'eyes'; /vas/ 'vase'; /va/ 'balance', 'scales', 'cart'; /ma/ 'stomach'; /rat/ 'advice'; /fra/ 'wife'.  
/vats/ 'wheat';<sup>24</sup> /špat/ 'late'.<sup>24</sup>

/ɔ/ This higher low back vowel occurs in all positions. Laxer and longer than /ɔ/. Always nasalized. The nasalization is phonemic.

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<sup>23</sup> /mɔrdɔr/ ~ /mɛrdɔr/.

<sup>24</sup> /vats/ and /špat/ are not typical of this phoneme; they do not have the same allophonic range in their vowel, which is regularly [ɒə]. /vats/ is an older form, now little used. It is replaced by /vaIts/.





[o:ə]~[o:] The allophone with the offglide is more frequent in monosyllabic than in polysyllabic words.

/bo/ 'legs'; /šta/ 'stone'; /klo/ 'small'; /ko/ 'no'(adj.)  
/‘oglok/ 'one bell'.

/o/ This higher low back vowel occurs in all positions. Laxer and longer than /ɔ/. Always nasalized. The nasalization is not phonemic.

[o:ə]~[o:] The offglide is more frequently found in monosyllabic than in polysyllabic words.

/hom/ 'home'; /getromt/ 'dreamt' (past part.);  
/‘klonə‘bu/ 'small book'; 'little boy'; /tswn/ 'fence'.

/o/ This mid back vowel occurs in all positions. Longer, laxer and more rounded than /ɔ/.

[o:]~[o:ə] As above.

/odər/ 'or'; /brot/ 'bread'; /geloe/ 'lied'(past part.);  
/nolə/ 'hill'; /‘no‘fembər/ 'November'; /štro/ 'straw';  
/gro/ 'gray'; /‘bloes‘kraut/ 'red cabbage'; /blo/ 'blue';  
/hols/ 'fetch it'; /rot/ 'red'.

[ɔ] Lower mid back. Slightly tense. Same lip rounding as [o:]. Occurs before /r/.

/geborən/ 'born'; /tor/ 'gate'.

/U/ This lower high back vowel does not occur finally. Tenser, less rounded, and shorter than /o/.

[U]~[Ů] Normally of short duration, /U/ is further shortened when appearing before voiceless consonants,



/x/, and /r/ plus voiceless consonant.

/stUm/ 'dumb'; /vɑ'rUm/ 'why'; /Uf/ 'on'; /'Um,laUfə/  
'to run around'; /dUm/ 'stupid'; /'sUn,tak/ 'Sunday';  
/kUmt/ 'comes'; /bUx/ 'book'; /mUtər/ 'mother'; /bUkəl/  
'back' (noun); /šUtər/ 'rubble'; /'kUk,rUts/ 'corn on  
the cob'; /krUk/ 'jug'; /hUpst/ 'hops', 'jumps';  
/tsUk/ 'train' (noun).

/u/ This high back vowel occurs in all positions, except before  
/x/ and /k/. Laxer, longer and more rounded than /U/.

[u:]~[y:ə] The offglide is more common in monosyllables  
than in polysyllabic words.

/gut/ 'good'; 'well'; /hut/ 'hat'; /'blUmən,kaxəl/ 'flower  
pot'; /ju:sə/ 'to use'; /du/ 'you' (familiar sing.);  
/,tut'sInə/ 'sings'; /'šU,maxər/ 'shoe-maker'; /ku/  
'cow'; /šul/ 'school'; /tsu/ 'to', 'shut', 'too';  
/'ur,laUp/ 'leave', 'furlough'; /bu/ 'boy'; /bubə/ 'boys'.

/ə/ This central, lax unrounded vowel does not occur in initial  
position, except as the unstressed indefinite article and  
has tertiary stress.

[ə]

/pedər/ 'Peter'; /maIsə/ 'mice'; /tsenə/ 'ten';  
/redə/ 'to talk'; /'kInə,vəčə/ 'babysitting'; /bibəl/  
'Bible'; /selbət/ 'self'; /'kesə,brot/ 'cheese sandwich';  
/menər/ 'more'; /'blUmən,kaxəl/ 'flower pot'.

1. The first part of the document is a list of names and addresses. The names are written in a cursive hand, and the addresses are written in a more formal, printed hand. The list is organized into columns, with names in the first column and addresses in the second column. The names are: John Smith, James Brown, William Jones, Robert White, and Thomas Green. The addresses are: 123 Main Street, New York, NY; 456 Elm Street, New York, NY; 789 Oak Street, New York, NY; 101 Pine Street, New York, NY; and 202 Cedar Street, New York, NY.

2. The second part of the document is a list of names and addresses. The names are written in a cursive hand, and the addresses are written in a more formal, printed hand. The list is organized into columns, with names in the first column and addresses in the second column. The names are: John Smith, James Brown, William Jones, Robert White, and Thomas Green. The addresses are: 123 Main Street, New York, NY; 456 Elm Street, New York, NY; 789 Oak Street, New York, NY; 101 Pine Street, New York, NY; and 202 Cedar Street, New York, NY.

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/kərpər/ 'body'; /dɔktər/ 'doctor'; /,dɛ'tsɛmbər/  
'December'; /mɔrdər/ 'murderer'; /ɛpəl/ 'apples';  
/fakəl/ 'bunch of straw' (for roof-making); /bʊkəl/  
'back' (noun).

In some cases vocalic continuants appear regularly.<sup>25</sup>  
/hɪbəl/ 'hill'; /satəl/ 'saddle'; /knebəl/ 'club'; 'cʌd-  
gel'; /hibən Unt dribən/ 'here and there'; /,sɔl'datən-  
'kap/ 'helmet'.

/aʊ/ This diphthong occurs in all positions. Its direction is from higher low front or upper low retracted front position to lower high back rounded. Sometimes the second element is lower high rounded central; when this happens, the first element is more central. This is a form which occurs under reduced emphasis. /aʊ/ is lax.

[a<sup>U]~[a<sup>U</sup>]~[a>sup>U]~[a<sup>U</sup>]. The emphasized allophones are

the first two in the list; the unemphasized allophones the third and fourth.

/,aʊ'gʊʃt/ 'August'; /,aʊgən'blik/ 'moment'; /traʊbə/  
'grapes'; /maʊs/ 'mouse'; /saʊər/ 'sour'; /haʊt/ 'skin';  
/ʃaʊm/ 'foam'; /plaʊdərə/ 'to chat'; /draʊs/ 'outside';  
/haʊs/ 'house'; /kaʊfə/ 'to buy'; /'ʌn,gləʊbɪx/ 'atheis-  
tic'; /aʊs/ 'out'.

/aɪ/ This diphthong occurs in all positions. Its direction is from low central to lower high central or to higher mid front. Sometimes the second element is an offglide.  
/aɪ/ is lax.

<sup>25</sup> Since only cases with vocalic consonant are recorded, phonemic notation without /ə/ is also justifiable.





[a<sup>ɪ</sup>]~[a<sup>e</sup>]~[a<sup>ə</sup>] As above.

/ʃtraɪx/ 'prank', 'trick'; /,naɪ'hut/ 'new hat';  
/haɪt/ 'today'; /laɪt/ 'people'; /aɪl/ 'owl'; /raɪs/  
'journey'; /raɪx/ 'rich'; /laɪs/ 'lice'; /haɪ/ 'hay';  
/gə'sʌnt,haɪt/ 'health'; /vaɪts/ 'wheat':

[aj] Before a vowel the second element of the diphthong becomes the glide [j].

/laɪə/ 'to lie' (i.e. 'recline'); /faɪər/ 'fire';  
/taɪər/ 'dear', 'expensive'.

/ɔɪ/ This rare diphthong occurs in all positions. Its direction is from upper low advanced back, rounded to lower high, front unrounded. Tension is lax.

[ɔɪ]

/mɔɪ/ 'May'; /vɔɪx/ 'done', 'cooked'; /rɔɪx/ 'smoke';  
/tɔɪk/ 'dough'.

[ɔj] The second element becomes [j] before vowels.

/ɔɪə/ 'eggs'; /mɔɪə/ 'to visit'.

## 2. Consonants

### (a) Stops

/p/ Bilabial voiceless stop, occurs in all positions.

Aspiration is never more than slight. In rapid speech lightly voiced, resulting in the neutralization of the contrast in initial /p/:/b/.

[p]~[b] Initial tension is lenis.

/pedər/ 'Peter'; /pɔʃt/ 'post(office)'; /pakə/ 'to pack';



/pIkə/ 'to pick'; /papiər/ 'paper'; /pʊnt/ 'pound';  
/paɪf/ 'pipe'; /pa'ket/ 'packet'; /past/ 'fits'(verb).

[p] Intervocalically /p/ is recorded only as preceded by  
normal or short vowels. Tension is fortis.

/ɛpəl/ 'apples'; /kɪpəl/ 'peak', 'summit'; /ʃtɒpət/  
'stopper'; /'hapɪx/ 'hawk'; /klɒpə/ 'to beat', 'knock';  
/rapələ/ 'to rattle'; /ʃɛpə/ 'to shovel'.

[p']~[p'] Finally after normal or short vowels tension is  
fortis.

/tɒp/ 'pot'; /tɛp/ 'pots'; /sɪp/ 'shovel'; /ʃɛp/ 'crooked';  
/kɒp/ 'head'; /kɛp/ 'heads'.

[p']~[p'] Finally after long vowels and diphthongs tension  
is lenis.

/lep/ 'lion'; /'Ur,laʊp/ 'leave', 'furlough'.

/t/ Apico-lingual or apico-post-dental, voiceless stop.

Occurs in all positions.

[t]~[d] In initial position tension is lenis and the  
contrast /t:/d/ is neutralized by almost invariable  
voicing.

/tak/ 'day'; /tɪʃ/ 'table'; /tɒp/ 'pot'; /tuə/ 'to do';  
/taɪər/ 'dear'; /tɪr/ 'door'; /'tɛləvɪʃən/ 'television';  
/taɪbəl/ 'devil'; /tɛp/ 'pots'.

[d] Intervocalically after long vowels and diphthongs,  
/t/ is lenis and voiced.

/gɛratən/ 'guessed'(past.part.); /,gʊtəs 'fɛlt/ 'good  
soil'; /ʃtraɪtə/ 'to quarrel';

I have been thinking of you very much lately  
and wondering how you are getting on.

I hope you are well and happy.

I have been thinking of you very much lately

and wondering how you are getting on.

I hope you are well and happy.

I have been thinking of you very much lately

and wondering how you are getting on.

I hope you are well and happy.

I have been thinking of you very much lately

and wondering how you are getting on.

I hope you are well and happy.

I have been thinking of you very much lately

and wondering how you are getting on.

I hope you are well and happy.

I have been thinking of you very much lately

[t] Intervocalically after normal or short vowels tension is fortis.

/mUtər/ 'mother'; /fatər/ 'father';<sup>26</sup> /šUtər/ 'rubble';  
/bətər/ 'beds'.

[t<sup>l</sup>] Before vocalic [l], tension lenis, release lateral.

[t<sup>n</sup>] Before vocalic [n], tension lenis, release nasal, glottal coarticulation.

/satəl/ 'saddle'; /bətəlt/ 'begs'; /ratən/ 'rats';  
/,səl'datən,kap/ 'helmet'.

[t']~[t<sup>l</sup>] Finally after long vowels and diphthongs, /t/ is lenis.

/hut/ 'hat'; /gut/ 'good'; /rot/ 'red'; /štraIt/ 'quarrel'  
(noun); /gə'sUnt,haIt/ 'health'; /brot/ 'bread'; /špat/  
'late'; /haUt/ 'skin'; /haIt/ 'today'; /saIt/ 'side';  
/sit/ 'south'; /laIt/ 'people'; /,advə'kat/ 'lawyer';  
/kraUt/ 'cabbage'; /sat/ 'seed'; /met/ 'girls'.

[t']~[t<sup>f</sup>] Finally after normal or short vowels tension is fortis.

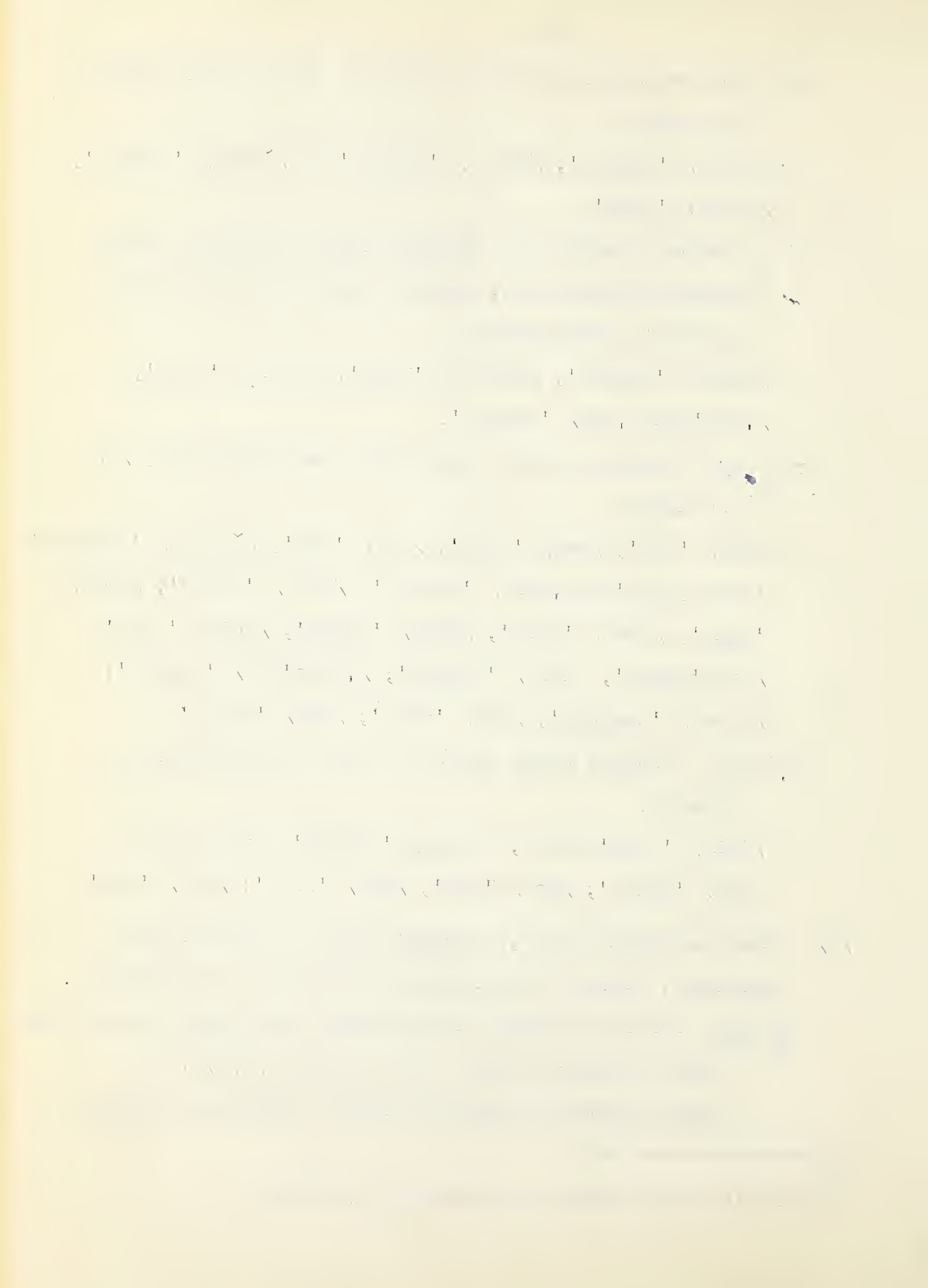
/šrIt/ 'step'(noun); /gərət/ 'talked' (past part.);  
/rət/ 'talks'; /gət/ 'God'; /mIt/ 'with'; /bət/ 'bed'.

/k/ Velar or palato-velar, voiceless stop. Occurs in all positions. Point of articulation depends on environment.

[k]~[g] Initially before front vowels, the point of articulation is palato-velar. The contrast /k/:/g/ is neutralized by frequent voicing. Tension is lenis.

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<sup>26</sup> This is an old form now replaced by /fadər/.



/kɪpəl/ 'peak', 'top'; /kes/ 'cheese'; /ki/ 'cows';  
/kɪnt/ 'child'; /kɪrx/ 'church'; /kɪč / 'shovel-like  
tool' (used in bread baking); /kaxəl/ 'pot' (earthenware).

[k]~[g] Initially before back vowels, the point of articulation is velar. Otherwise as above.

/'kUk,rUts/ 'corn on the cob'; /kUmə/ 'to come'; /kɔrp/  
'basket'; /ku/ 'cow';

[k]~[g] Intervocalically this phoneme is recorded only as preceded by normal or short vowels. After front vowels the point of articulation is palato-velar. Voicing is infrequent. Tension is fortis unless the stop is voiced.

/fakələ/ 'bunches of straw' (for roof making); /nakənt/  
'bare', 'naked'; /pɪkə/ 'to pick'; /šɪkə/ 'to send';  
/pakə/ 'to pack'; /flɪkə/ 'to patch', 'darn'; /jUkə/ 'to itch'.

[k]~[g] Intervocalically after back vowels, point of articulation is velar. Otherwise as above.

/bUkəl/ 'back'; /gUkə/ 'to look'; /glɔkə/ 'bells';  
/'šɔkəl,štul/ 'rocking chair'; /trUkə/ 'dry' (adj.).

[k] Finally this phoneme is recorded only once as preceded by a long vowel, otherwise by normal or short vowels.<sup>27</sup> Before front vowels the point of articulation is palato-velar. This allophone is always voiceless. Tension is fortis.

/krɪk/ 'jugs'; /'špɛk,maUs/ 'bat'; /dɪk/ 'fat'; /glɪk/

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<sup>27</sup> The exception is /tak/ 'day'.





'happiness', 'good luck'; /,aUgən'blik/ 'moment';  
/sak/ 'pocket'.

[k] Finally after back vowels, the point of articulation is velar. Otherwise as above.

/'haɪ,ʃtɔk/ 'haystack'; /tʃʊk/ 'train'; /krʊk/ 'jug';  
/ʃʊk/ 'shoe'; /flɔk/ 'flea'.

/b/ Bilabial voiced lenis stop. Does not occur finally.

[b] As above.

/bez/ 'bad', 'wicked'; /ban/ 'railway'; /balkə/ 'beam';  
/baʊə/ 'to build'; /ber/ 'bear'; /bax/ 'river';  
/bɪsjə/ 'bit' (noun); /bʊkəl/ 'back' (noun); /bæŋk/ 'bench';  
/'bʊx,sak/ 'satchel'; /bibəl/ 'Bible'; /bɛtəlt/ 'begs';  
/besəm/ 'broom'.

[β]~[b] Intervocalic /b/ is a bilabial voiced lenis spirant, except when it follows a normal length vowel; then there is sometimes a stop.

/da'dribər/ 'over there'; /traʊbə/ 'grapes'; /hɛbə/  
'bowl'; /rɒbə/ 'ravens'; /habə/ 'saucepan'; /'mɔɪ,kebər/  
'May bug'; /sɪbə/ 'seven'; /bibəl/ 'Bible'; /bubə/ 'boys';  
/'ʃve,bɪʃ/ 'Swabian'; /'ʃraɪp,tɒbəl/ 'handbag'; /'ebɪx/  
'eternal'; /habər/ 'oats'.

[b] After a normal vowel and preceding a vocalic consonant, the stop occurs.

/'hɛbəlɪxjə/ 'cup'; /hɪbəl/ 'hill'; /trabəl/ 'trouble';  
/mɛr 'habən gə'ret/ 'we talked';<sup>28</sup> /traʊbən/ 'grapes'.<sup>29</sup>

<sup>28</sup> This form is not usual; one would expect: /mɛr hən gərɛt/.

<sup>29</sup> This form varies with /traʊbə/ where /b/ is a spirant.



/d/ Apico-lingual or apico-post-dental voiced lenis stop.

Does not occur finally.

[d] As above.

/dɔrf/ 'village'; /,dɛ'tɛmbər/ 'December'; /dɔktər/  
'doctor'; /dəs'sɛlbə/ 'the same'; /dUm/ 'stupid';  
/dIk/ 'thick'; /'dinʃ,tak/ 'Tuesday'; /dIn/ 'thin'.

[d] Intervocalic /d/ is a post-dental, lenis spirant after long vowels and diphthongs.<sup>30</sup>

/'haI,bodəm/ 'hay loft'; /'aUs,braIdə/ 'to spread out';  
/glidər/ 'limbs'; /pedər/ 'Peter'; /medə/ 'girl';  
/ʃnaIdə/ 'to cut'; /odər/ 'or'; /gedə/ 'to weed';  
/'tsaI,dun/ 'newspaper'; /bodəm/ 'ground', 'floor';  
/fadəm/ 'thread'; /vaIdər/ 'farther'; /ladər/ 'ladder'.

[d]~[d] After normal vowels the stop sometimes occurs.

/vIdər/ 'again'; /rɛdə/ 'to talk'; /ʃIdə/ 'to pour';  
/'prɛdIgər/ 'preacher'.

/g/ Velar or palato velar, voiced, lenis stop. Does not occur finally. Point of articulation varies according to environment.

[g] Initially before front vowels, point of articulation is post palatal.

/gisə/ 'to pour'; /gaUl/ 'horse'; /gɛrʃt/ 'barley';  
/gIlə/ 'guilder' (coin used in Galicia); /gedə/ 'to weed';

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<sup>30</sup> If /d/ were to follow the same pattern as /b/, there would be a stop alternative for this allophone after a normal vowel and before a vocalic consonant. No examples of this sequence were recorded.

I have been thinking of you very much lately  
and wondering how you are getting on  
I hope you are well and happy  
I have been very busy lately  
but I will write to you soon

Yours

I have been thinking of you very much lately  
and wondering how you are getting on  
I hope you are well and happy  
I have been very busy lately  
but I will write to you soon

I have been thinking of you very much lately

I have been thinking of you very much lately  
and wondering how you are getting on  
I hope you are well and happy  
I have been very busy lately  
but I will write to you soon

Yours

/gansərt/ 'gander'.

[g] Initially before back vowels, point of articulation is velar.

/gut/ 'good'; /gaɪl/ 'horses'; /gɔt/ 'God'; /gUkə/ 'to look'; /gUmərə/ 'gherkins'; /gaɪšt/ 'ghost'.

[j]~[j]~[ø] Intervocalically after long front vowels, the point of articulation (unless the zero allophone occurs) is post palatal.<sup>1</sup> The most common allophone [ø], but the voiced spirant [j] or the glide [j] occur under emphasis.

/krigə/ 'to get'; /regənt/ (it) 'is raining'; /negəl/ 'nails'; /tɕigəl/ 'tiles'; /fegəl/ 'birds'; /ʃtrigəl/ 'curry comb'; /ʃtregəl/ 'hair comb'.

#### (b) Affricates

/tɕ/ Blade-alveolar, voiceless affricate. Occurs in all positions.

[tɕ]~[tɕ]~[tɕ]~[tɕ] Initially in unemphasized forms the [t] tends to be evanescent, whereas the [s] has semi-lenis or fortis tension.

/tɕelə/ 'to count'; /tɕUk/ 'train'; /tɕenə/ 'ten';  
/tɕigəl/ 'tiles'; /tɕu/ 'to', 'too'; /tɕɔn/ 'fence';  
/'tɕaɪ, dUŋ/ 'newspaper'; /'tɕɪmlɪx/ 'fairly', 'rather';  
/tɕe/ 'tough'; 'toe'; /tɕe/ 'teeth'.

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<sup>1</sup> The only recording of a long back vowel before medial /g/ is /fogəl/ 'bird' realized [fo: əl], [fo: əl] and [fo:]; the only normal vowel recorded before /g/ was /rɔgən/ realized as [rɔg<sup>N</sup>ŋ]

1. The first part of the paper is devoted to a discussion of the

main results of the paper, which are summarized in the following

theorems.

1. Let  $f(x)$  be a function defined on the interval  $[a, b]$  and

let  $F(x)$  be its antiderivative. Then

the following theorem holds:

THEOREM 1.

Let  $f(x)$  be a function defined on the interval  $[a, b]$  and

let  $F(x)$  be its antiderivative. Then

the following theorem holds:

THEOREM 2.

Let  $f(x)$  be a function defined on the interval  $[a, b]$  and

let  $F(x)$  be its antiderivative. Then

the following theorem holds:

THEOREM 3.

Let  $f(x)$  be a function defined on the interval  $[a, b]$  and

let  $F(x)$  be its antiderivative. Then

the following theorem holds:

THEOREM 4.

Let  $f(x)$  be a function defined on the interval  $[a, b]$  and

let  $F(x)$  be its antiderivative. Then

the following theorem holds:

THEOREM 5.

THEOREM 6.



[ts] Intervocalically after normal or short vowels tension is fortis.<sup>2</sup>

/atsəl/ 'magpie'; /platsə/ 'to burst'; /,dɛ'tsɛmbər/ 'December'; /špatsə/ 'sparrows'; /kratsə/ 'to scratch'.

[ts]~[ts] Finally tension is fortis after normal vowels; lenis after diphthongs and long vowels.

/'kUk,rUts/ 'corn on the cob'; /vaIts/ 'wheat'; /vIts/ 'joke'; /'nIks,nUts/ 'useless'; /kraIts/ 'cross'(noun).

/č/ Blade-palato-alveolar affricate. Does not occur initially. Tension is difficult to judge from the small number of examples but would appear to conform to the general pattern: fortis after normal or short vowels, lenis elsewhere.

[tš] Intervocalically:

/,daIčə'laIt/ 'German people'; /plačə/ 'to splash'.

[tš] Finally:

/daIč/ 'German'; /paIč/ 'whip'(noun); /kIč/ 'shovel-like tool' (used in bread making).

### (c) Spirants

/f/ This labio-dental or bilabial voiceless fricative occurs in all positions. It is slightly tenser than /v/. Labio-dental forms often occur under emphasis, in which case the upper lip is raised slightly to avoid impeding the articulation between lower lip and upper teeth. In normal

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<sup>2</sup> No examples recorded of long vowel preceding /ts/. /kraItsər/ (Standard German "Kreutzer", a coin used in Galicia).



rapid speech the lips come close enough together to produce a bilabial spirant.

[f]~[f]~[ϕ]~[ϕ] In initial position tension is lenis or semi-lenis.

/faIər/ 'fire'; /firə/ 'four'; /fimfə/ 'five';  
/'fɛbrər/ 'February'; /'far,ɔks/ 'bull'; /fIlə/ 'foal';  
/fɛlt/ 'field'; /fɛrt/ 'horse' ; /fɔrt/ 'away'; /fegəl/  
'birds'; /'fIrtɛsIks/ 'forty'; /fis/ 'feet'; /fix/ 'cattle';  
/fil/ 'much'; /'fɛrtIks/ 'ready'; /fədər/ 'father'.<sup>4</sup>

[f]~[v]~[ϕ]~[β]. Intervocally after long vowels and diphthongs there is a tendency to voicing; tension is lenis.

/šafə/ 'sheep'(dat.sing.); /,no'fɛmbər/ 'November';  
/šlafə/ 'to sleep'; /šnaUfə/ 'to breathe'; /laUfə/ 'to  
run'; /kaUfə/ 'to buy'.

[f]~[f] Intervocally after normal vowels tension is semi-lenis or fortis. No voicing.

/sIfer/ 'drunkard'; /šafə/ 'to work'; /rafə/ 'to grab',  
'to pick up'.

[f]~[ϕ] Finally after long vowels and diphthongs tension is lenis.

/gəšlaf/ 'slept'(past part.); /šaf/ 'sheep'(singular);  
/'lebəns,laUf/ 'course of life'; /paIf/ 'pipe'.

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The usual term is /gaUl/.

<sup>4</sup> This form, realized [fədərʃ], is commoner than /fatər/ which is now obsolete.

# THE HISTORY OF THE UNITED STATES

OF THE UNITED STATES OF AMERICA

BY

JOHN F. JOHNSON, M.D.

OF THE UNIVERSITY OF CHICAGO

AND

OF THE UNIVERSITY OF CALIFORNIA

AND

OF THE UNIVERSITY OF MICHIGAN

AND

OF THE UNIVERSITY OF TEXAS

AND

OF THE UNIVERSITY OF VIRGINIA

AND

OF THE UNIVERSITY OF WISCONSIN

AND

OF THE UNIVERSITY OF ILLINOIS

AND

OF THE UNIVERSITY OF MINNESOTA

AND

OF THE UNIVERSITY OF NEBRASKA

AND

OF THE UNIVERSITY OF KANSAS

AND

OF THE UNIVERSITY OF OKLAHOMA

[f]~[ɸ] Finally after normal vowels /f/ is slightly tenser than after long.

/,ʃtaɪ 'Uf/ 'get up!'; /ʃɪf/ 'ship'; /drʊf/ 'on it'.

/v/ This bilabial or labio-dental voiced lenis spirant occurs only in initial position. The labio-dental spirant is rare in this idiolect. Usually the amount of friction in this phoneme is slight, and the realization [w] frequently occurs when no emphasis is laid on the word in question.

[v]~[β]~[w] In initial position before rounded vowels [w] is found. Otherwise initially the variation depends on emphasis, [v] being emphatic, [w] unemphatic.

/'vɪndɪx/ 'windy'; /'vaɪ,naxtə/ 'Christmas'; /vaɪn/ 'wine'; /'vɪrts,haʊs/ 'inn'; /vasər/ 'water'; /vas/ 'vase'; /vɛʃə/ 'wash'; /vɑrm/ 'warm'; /vɛrfə/ 'to throw'; /vaɪdər/ 'farther'; /vɔɪx/ 'soft'; /vɔɪl/ 'wool'; /vaɪts/ 'wheat'; /va/ 'scales' or 'wagon'; /vantʃə/ 'bugs'.

/s/ Blade-alveolar groove fricative. The allophone [s] has greater tension than [z]. Occurs in all positions.

[s]~[z] Initially before vowels the voiceless phoneme more frequent.

/,sɛp'tɛmbər/ 'September'; /sɛlbə/ 'same'; /satəl/ 'saddle'; /sɛksə/ 'six'; /sɪbə/ 'seven'; /sɪfər/ 'heavy drinker'; /saɪt/ 'side'; /saʊər/ 'sour'; /saltz/ 'salt';

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

/sIn/ 'to be'; /saxə/ 'affair'; /səmə/ 'seed'.

[s]~[z] Intervocally after long vowels and diphthongs  
/s/ is lenis;

/,kI'nesər/ 'Chinaman'; /raIsə/ 'to tear'; /gisə/ 'pour';  
/glesər/ 'glasses'; /maIsə/ 'mice'; /'kesə,brot/ 'cheese  
sandwich'; /šmaIsə/ 'to throw'; /fɛ'gresə,rUŋ/ 'enlarge-  
ment';

[s] Intervocally after normal length vowels tension  
is semi-lenis. No voicing.

/vasər/ 'water'; /šIsəl/ 'dish'; /glesər/ 'glasses'<sup>35</sup>  
/hasə/ 'to hate'.

[s]~[z] Finally after vowels: lenis.

/draUs/ 'outside'; /kes/ 'cheese'; /glas/ 'glass';  
/laIs/ 'lice'; /raIs/ 'journey'; /maUs/ 'mouse'; /bes/  
'bad', 'wicked'; /klas/ 'class'; /vas/ 'vase'; /has/  
'rabbit'; /das/ 'that'; /'štrak,aUs/ 'straight ahead';

/š/ Voiceless fricative articulated between the alveolus and  
the blade of the tongue which together form a slit  
narrowing to the front. The greatest constriction is  
between the alveolus and the blade. Lips slightly  
protruded for this sound. Tension is lenis. No posi-  
tional variants could be distinguished. /š/ is  
realized as [š] in all positions.

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<sup>35</sup> /glesər/~glesər/





Initially before vowels:

/šIp/ 'shovel'; /šɛnə/ 'to scold'; /šIsəl/ 'dish';  
/šɛrbəl/ 'shard'; /šaUm/ 'foam'; /šɛp/ 'crooked';  
/šIdə/ 'to pour'; /šUtər/ 'rubble'; /šaf/ 'sheep';  
/šul/ 'school'.

Intervocalically:

/vcšə/ 'to wash'; /gəšIxtə/ 'story'; /kraIšə/ 'to screech'.

Finally after vowels:

/cš/ 'ashes'; /tIš/ 'table'; /flaIš/ 'meat'; /'švebIš/  
'Swabian'; /,fran'tsesIš/ 'French'.

/x/ Velar or palato-velar, voiceless fricative. The point of articulation depends on environment. Does not occur initially.

[ç]~[j] Intervocalically after long front vowels or diphthongs whose second element is a front vowel, point of articulation is post palatal and tension is lenis. Frequent voicing.

/rixə/ 'to smell'; /braIxəns/ (we) 'need it'; /špaIxət/ 'loft', 'granary'; /krixə/ 'wars'; /gləIxə/ 'to like'.

[ç]~[j] Intervocalically after short front vowels, the point of articulation is as above, except in the case of /x/ following /a/: here articulation is retracted from the palate but is not as far back as /x/ after /U/. Tension semi-lenis.

/sprɛxə/ 'to speak'; /krIxə/ 'to crawl'; /maxə/ 'to make';  
/kaxəl/ 'pot'; /zaxə/ 'thing', 'affair'; /'šU,maxər/



/laxə/ 'to laugh'.

[x̥]~[χ] Intervocally after back vowels, the point of articulation is velar. Tension lenis.

/knɔxə/ 'bones'.

[ç̥]~[ç] Finally after front vowels or diphthongs ending in a front vowel, the point of articulation is post palatal. Tension after diphthongs and after tertiary stress is lenis. Elsewhere semi-lenis. No voicing. Articulation following /a/ as above. No long vowels recorded before final /x/.

/Ix/ 'I'; /rɪIx/ 'rich'; /vɔIx/ 'soft'; /'nɪdIx/ 'angry'; /'hɒnIx/ 'honey'; /'ʌnIx/ 'under'; /štraIx/ 'prank', 'trick'; /švax/ 'weak'; /bax/ 'river'; /'nebIx/ 'beside'.

[x̥]~[χ] Finally after back vowels or diphthongs ending in back vowels, the point of articulation is velar. Tension is semi-lenis unless following a diphthong, then it is lenis.

/bUx/ 'book'; /nɔx/ 'still'; 'yet'; /fɛbrɔx/ 'broken'; /lɔx/ 'hole', 'cave'; /aUx/ 'also'; /šlaUx/ 'hose', 'clever'.

/h/ Laryngeal, voiceless spirant. The constriction is at no time sufficient to produce audible friction of the same volume as /f/, /s/, /x/. The articulators take up the position for the following vowel. Occurs predominantly in initial position. /h/ is produced with moderate aspiration and is not present in clusters.



[h] Initially:

/ˈhɒnɪx/ 'honey'; /haʊs/ 'house'; /haɪ/ 'hay'; /hɛl/ 'Hell'; /haʊt/ 'skin'; /hɛbəl/ 'bowl'; /hʌt/ 'hat'; /hæz/ 'rabbit'; /hæbər/ 'oats'; /hæbəl/ 'saucepan'; /hɪbəl/ 'hill'.

[h] Intervocally:

/ˌalkəˈhɒl/ 'alcohol'; /ˈjoˌhæn/ 'John'.

(d) Nasals

/m/ Bilabial, voiced, nasal continuant. Occurs in all positions. May cause marked nasalization preceding vowel.

[m] Initially:

/mʊtər/ 'mother'; /mɜːts/ 'March'; /mɔɪ/ 'May'; /ˈmʊʃˌræt/ 'muskrat'; /ˈmɪsgəˌbʊrt/ 'dwarf'; /mə/ 'stomach'; /mɔɪə/ 'to visit'; /mɜːxjə/ 'fairy story'; /ˈmɪlɪx/ 'milk'.

[m] Intervocally:

/ˈblʊmənˌkaxəl/ 'flower pot'; /ˈoˌmɛntəsə/ 'ants'; /ˈʃʊˌmaxər/ 'shoe maker'; /ˈnɪˌme/ 'no more'; /gəˌmɔɪt/ 'visited' (past part.); /gʊˌmərə/ 'gherkin'; /nʊˌmərə/ 'numbers'.

[m] Finally:

/fədəm/ 'thread'; /bədəm/ 'floor'; 'ground'; /laɪm/ 'glue'; /ʃaʊm/ 'foam'; /krʊm/ 'crooked'; /ræm/ 'cream'; /ʃtʊm/ 'dumb'; /həʊm/ 'home'<sup>36</sup>; /dʊm/ 'stupid'; /kʊm/ 'come' (past

<sup>36</sup> /həʊm/ is the only case of final /m/ being realized only by nasalization of the preceding vowel: [h :ə]

I have been thinking of you very much lately.

I hope you are well and happy.

I have been thinking of you very much lately.

I hope you are well and happy.

I have been thinking of you very much lately.

I hope you are well and happy.

I have been thinking of you very much lately.

I hope you are well and happy.

I have been thinking of you very much lately.

I hope you are well and happy.

I have been thinking of you very much lately.

I hope you are well and happy.

I have been thinking of you very much lately.

I hope you are well and happy.

I have been thinking of you very much lately.

I hope you are well and happy.

I have been thinking of you very much lately.

I hope you are well and happy.

I have been thinking of you very much lately.

I hope you are well and happy.

I have been thinking of you very much lately.

I hope you are well and happy.

I have been thinking of you very much lately.

I hope you are well and happy.

I have been thinking of you very much lately.

I hope you are well and happy.



part.); /kram/ 'cramp' (noun); /besəm/ 'broom'.

/n/ Apico-lingual or apico-post-dental, voiced, nasal continuant. Occurs in all positions. May cause marked nasalization on preceding vowel.

[n̥] Initially:

/nəInə/ 'nine'; /negəl/ 'nails'; /,no'fɛmbər/ 'November';  
/nɛt/ 'not'; /nɔ/ 'no'; /nɔrt/ 'north'; /nɔx/ 'still';  
'yet'; /'netlɪx/ 'necessary'; /'nɪks,nʊts/ 'useless';  
/nʊmərə/ 'numbers'.

[n̥] Intervocally:

/'hɒnɪx/ 'honey'; /nəInə/ 'nine'; /tɛsənə/ 'ten'; /ʃɛnə/  
'to scold'; /jɛnər/ 'January'; /'jʊ,ni/ 'June';  
/renə/ 'to rain'; /,kɪ'nesər/ 'Chinaman'; /hʊnɛrt/  
'hundred'; /'ʊnɪx/ 'under'; /ə ,klɒnə 'bu/ 'a small  
book', 'a small boy'; /menər/ 'more'; /lənə/ 'reins'.

Finally. As has been noted in the discussion of nasalization,<sup>37</sup> the /n/ is frequently represented in final position by [̥], which, therefore, becomes an allophone of /n/. The absence of [n̥] is more characteristic after long than after normal vowels. In the latter position no case of [n̥] - evanescence is recorded for a single utterance.

[n̥]~[̥]. This allophonic range occurs finally after normal length vowels.<sup>38</sup>

<sup>37</sup> See pp.24-25.

<sup>38</sup> An exception is /hɪn/ 'away', 'down', which is often realized as [hɪ̥n̥].



/In/ 'in'; /fon/ 'of', 'from'; /man/ 'man' (noun);  
/sIn/ 'to be'; /kan/ 'can' 'am able'; /dan/ 'then'.

[ŋ]~[ŋ̃]~[,]. This allophonic range occurs finally after long vowels and diphthongs.

/ban/ 'railway'; /šen/ 'beautiful'; /braUn/ 'brown';  
/tswan/ 'fence'.

[ŋ]~[ŋ̃]~[,ŋ]~[,ŋ̃] Allophones occurring before velar stops.

Point of articulation varies as in the case of /k/,  
/g/, /x/.

/'blumən,kaxəl/ 'flower pot'; ε/,sIn 'kUm/ 'have come';  
/'hIngə,let/ 'laid down' (past part.).

/ŋ/ Velar or post palatal, voiced, nasal continuant. Does not occur initially. Usually causes marked nasalization. Its point of articulation varies with environment, as does that of /k/, /g/, /x/.

[ŋ]~[ŋ̃]~Intervocally:

[ŋ]~[ŋ̃] /sInə/ 'to sing'; /fInər/ 'finger'; /dInə/ 'things';  
/rInə/ 'squares' (in towns); /,lanə'tsaIt/ 'long time'.

[ŋ]~[ŋ̃]~Finally:<sup>39</sup>

[ŋ]~[ŋ̃] /lUn/ 'lung'; /gəsUn/ 'sung' (past part.); /'tsaI,dUn/  
'newspaper'; /rIn/ 'square' (in a town); /lan/ 'long'.

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<sup>39</sup>There is no recording of final /ŋ/ being realized by the nasalization of the preceding vowel alone, in contrast to /m/ and /n/, which are sometimes thus realized.



(e) Laterals

/l/ Apico-lingival or apico-post-dental, voiced, lateral continuant. Normally slightly velarized, it is more so after the following vowels: /a/, /ə/, /ɑ/, /ɔ/, /o/, /U/, /u/. /l/ occurs in all positions.

[l] Initially:

/,lɪŋksə 'hant/ 'left hand'; /laɪm/ 'glue'; /laɪxt/ 'light'(not heavy); /lep/ 'lion'; /ləɪs/ 'lice'; /lʊŋ/ 'lung'; /laɪt/ 'people'; /let/ 'lays'(verb); /lebe/ 'to live'; /lɪxtər/ 'altar candles'; /laxə/ 'to laugh'; /laʊfə/ 'to run'.

[l]~[ɫ] Intervocalically after front vowels except /a/:

/tsele/ 'to count'; /fɪle/ 'foal'; /'mɪlɪx/ 'milk'; /brɪle/ 'glasses'; /ʃtele/ 'to steal'; /,kɪlʔtak/ 'cool day'; /'tɛle,vɪʃən/ 'television'; /gɪle/ 'guilder'(coin used in Galicia).

[ɫ] Intervocalically after other vowels:

/fakəl/ 'bunch of straw'(for roof making); /'ju,li/ 'July'; /nole/ 'hill'; /alə/ 'all'; /'hɔ,lɛndər/ 'Dutchman'; /knʊle/ 'potato';<sup>40</sup> /ʃtrale/ 'beams'(of light); /rapəle/ 'to rattle';

[l] Finally after short front vowels except /a/:

/a'prɪl/ 'April'; /hɛl/ 'Hell'; /ʃtɪl/ 'still','quiet'; /vɪl/ 'wants'(verb).

[l]~[ɫ] Finally after long front vowels where the vowel

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<sup>40</sup> /'grʊm,berə/ is the usual term.



is followed by an offglide, there will result the same velarization as after /ə/.

/štrigəl/ 'curry comb'<sup>41</sup>; /el/ 'oil'; /ail/ 'owl';  
/štregəl/ 'hair comb'<sup>41</sup>; /fil/ 'much'; /hel/ 'lair' (of  
a wolf); /štil/ 'chairs'.

[ɫ] Finally after /ə/ and back vowels:

/negəl/ 'nails'; /tɛsigəl/ 'tiles'; /kɪpəl/ 'peak', 'sum-  
mit'; /ɛpəl/ 'apples'; /'blumən, kaxəl/ 'flower pot';  
/šɪsəl/ 'dish'; /atsəl/ 'magpie'; /satəl/ 'saddle';  
/hɪbəl/ 'hill'; /vɔl/ 'wool'; /bʊkəl/ 'back' (noun);  
/šul/ 'school'.

#### (h) Trills

/r/ Apico-alveolar, voiced trill. Under emphasis it is regularly realized as [ř]; a less emphatic form is [ʀ], which occurs more often than the untrilled [r], also a less emphatic form. /r/ occurs in all positions.

[ř]~[ʀ]~[r] Initially before vowels:

/regent/ (it) 'rains'; /rixə/ 'to smell'; /rɪnt/ 'head  
of cattle'; /rɔgən/ 'barley'; /rɛm/ 'cream'; /raʊbər/  
'robber'; /rat/ 'rat'; /rɔp/ 'raven'; /re/ 'rain' (noun);  
/rɛxə/ 'rake'; /rɛdə/ 'talk'.

[ř]~[ʀ]~[r] Intervocally:

/fire/ 'four'; /gəbɔrən/ 'born'; /karə/ 'car'; /šmɛrə/ 'to

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<sup>41</sup> This applies when the realizations are with /g/ at zero  
/štrigəl/ becomes [štrɪɛɫ]  
/štregəl/ " [štreɛɫ]





spread'; /'far,ɔks/ 'bull'; /ɔʃtərə/ 'Easter'; /gUmərə/  
'gherkins'; /,gɛlə'ribə/ 'carrots'.

[ř]~[ʁ]~[r]~[r̥]~[ʀ]~[ɹ]~[ø] Finally devoicing may occur.

This allophonic range is in order of decreasing emphasis.

/jɛnər/ 'January'; /jɑr/ 'year'; /dɔktər/ 'doctor';  
/vasər/ 'water'; /sɪfər/ 'heavy drinker'; /'mɔɪ,kebər/  
'Maybug'; /habər/ 'oats'; /pedər/ 'Peter'; /ʃUtər/ 'rubble'  
/kɛrpər/ 'body'; /faɪər/ 'fire'; /saUər/ 'sour/.

#### (g) Semi-vowels

/j/ Point of articulation is a constriction between dorsum and palate. Constriction is insufficient to produce friction sounds as in [j]. Voiced. Occurs only in initial position before vowels.

[j]

/jɛnər/ 'January'; /juni/ 'June'; /juli/ 'July';  
/jUkə/ 'to itch'; /jɑr/ 'year'; /juse/ 'to use';  
/ja/ 'yes'.

#### H LIST OF CLUSTERS

The order followed is by the beginning phonemes of the clusters.

Although some clusters ending in /s/ are due to contractions of /ɛs/ 'it', they are included because of their frequency, e.g. /brɪxəns/ (we) 'use it'.

Tension for the stops and spirants is given except where insufficient evidence was present.

1. The first part of the paper is devoted to a general discussion of the problem of the existence of solutions of the system of equations (1) and (2) under the assumption that the functions  $f_i(x)$  and  $g_j(x)$  are continuous and satisfy certain conditions.

2. In the second part, we consider the case when the functions  $f_i(x)$  and  $g_j(x)$  are piecewise continuous and the system of equations (1) and (2) is solved in the sense of distributions.

3. The third part of the paper is devoted to the study of the properties of the solutions of the system of equations (1) and (2) under the assumption that the functions  $f_i(x)$  and  $g_j(x)$  are continuous and satisfy certain conditions.

4. In the fourth part, we consider the case when the functions  $f_i(x)$  and  $g_j(x)$  are piecewise continuous and the system of equations (1) and (2) is solved in the sense of distributions.

5. The fifth part of the paper is devoted to the study of the properties of the solutions of the system of equations (1) and (2) under the assumption that the functions  $f_i(x)$  and  $g_j(x)$  are continuous and satisfy certain conditions.

6. In the sixth part, we consider the case when the functions  $f_i(x)$  and  $g_j(x)$  are piecewise continuous and the system of equations (1) and (2) is solved in the sense of distributions.

7. The seventh part of the paper is devoted to the study of the properties of the solutions of the system of equations (1) and (2) under the assumption that the functions  $f_i(x)$  and  $g_j(x)$  are continuous and satisfy certain conditions.

8. In the eighth part, we consider the case when the functions  $f_i(x)$  and  $g_j(x)$  are piecewise continuous and the system of equations (1) and (2) is solved in the sense of distributions.

9. The ninth part of the paper is devoted to the study of the properties of the solutions of the system of equations (1) and (2) under the assumption that the functions  $f_i(x)$  and  $g_j(x)$  are continuous and satisfy certain conditions.

10. In the tenth part, we consider the case when the functions  $f_i(x)$  and  $g_j(x)$  are piecewise continuous and the system of equations (1) and (2) is solved in the sense of distributions.

/pt/ Occurs in one syllable, after the climax. /p/ unreleased.

/fɛ'klɔpt/ 'battered'(adj.)

Also occurs bridging two syllables.

/,sɛp'tɛmbər/ 'September'; /'apɣə,ʃɛptə 'mɪlɪx/ 'skim milk'.

/ps/ Occurs in one syllable, after the climax.

\* /klɔps/ 'hit it' (imperative).<sup>42</sup>

Also occurs bridging two syllables.

/hʊpsə/ 'to jump'.

/pl/ Occurs in one syllable, before the climax. The stop is lenis. There is neutralization of the contrast /pl:/ /bl/.

The nature of /l/ depends on the following vowel.

/plaʊdərə/ 'to talk','chat'; /'plat,kɔp/ 'bald head';

/platsə/ 'to burst'; /plapɛrt/ 'chatters'; /plaʃt/

'splashes'(verb); /plɛtsər/ 'seats','places'.

/pr/ Occurs in one syllable, before the climax. The stop is lenis. There is neutralization of the contrast /pr:/ /br/.

The nature of /r/ varies as outside clusters.

/praɪs/ 'price'; /a'prɪl/ 'April'; /'predɪx/ 'sermon';

/'prɛdɪgər/ 'preacher'; /prɔʃt/ 'simple','common'.

/tr/ Occurs in one syllable, before the climax. The stop is lenis. The contrast /tr:/ /dr/ is neutralized.

/trʊkə/ 'dry'(adj.); /trɪŋkə/ 'to drink'; /traʊbə/'grapes<sup>43</sup>

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<sup>42</sup> An asterisk(\*) preceding the first oblique line indicates that this form was not actually recorded but that there is no doubt in the investigator's mind that it exists.

<sup>43</sup> /traʊbə/~ /traʊbən/



/trabəl/ 'trouble'; /trip/ 'dull'; 'gloomy'; /gətrəmt/  
'dreamt'(past part.).

/kt/ Occurs in one syllable, after the climax. The /k/ is  
not released.

/gUkt/ 'looks'(verb); /šIkt/ 'sends'.

Also occurs bridging two syllables.

/,ɔk'tobər/ 'October'; /dɔktər/ 'doctor';

/kv/ Occurs in one syllable, before the climax.

/kvəlt/ 'oozes'.

/ks/ Occurs in one syllable, after the climax.

/'far,ɔks/ 'bull'; /sɛks/ 'alternative form of /sɛksə/  
'six'; /nɪks/ 'nothing'.

Also occurs bridging two syllables.

/sɛksə/ 'six'; /flɛksə/ 'to flex'.

/kn/ Occurs in one syllable, before the climax. Tension is  
lenis. Release of the /k/ is direct into the nasal  
cavity: [k<sup>N</sup>ŋ] [g<sup>N</sup>ŋ] [k<sup>N</sup>n] [g<sup>N</sup>n]

/knɔxə/ 'bone'; /knebəl/ 'club'(weapon); /knUlə/  
'potatoes';<sup>44</sup> /kniə/ 'to kneel'.

/kl/ Occurs in one syllable, before the climax. /k/ is lenis.  
The nature of /l/ depends partly on the following vowel,  
but is never clear because of the nearness of /k/.

Contrast /kl/: /gl/ neutralized.

/klas/ 'class'; /klɔ/ 'small'; /klopə/ 'to beat', 'knock';  
/kle/ 'clover'.

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<sup>44</sup> This word is not customary for the informant; she usually  
uses /'grUm,berə/.





/kr/ Occurs in one syllable, before the climax. /k/ is lenis; /r/ as elsewhere. Contrast /kr/: /gr/ neutralized.

/krUm/ 'crooked'; /krigə/ 'to get'; /krUšt/ 'crust'(bread);  
/krants/ 'wreath'; /kraIts/ 'cross'(noun); /krIxə/ 'to  
crawl'; /kratsə/ 'to scratch'; /kraIšə/ 'to howl';  
/kraUt/ 'cabbage'; /kram/ 'cramp'(noun).

Also occurs bridging two syllables:<sup>45</sup>

/'kUk,rUts/ 'corn on the cob'.

/bl/ Occurs in one syllable, before the climax. The contrast /bl/: /pl/ is neutralized. The stop is lenis; the nature of /l/ depends on the following vowel.

/'blumən,kaxəl/ 'flower pot'; /blo/ 'blue';  
/,aUgən'blik/ 'moment'; /brIlə/ 'glasses', 'mask';  
/'blaŋkə,tsɔn/ 'wooden fence'; /blaŋk/ 'fence board';  
/blaIbə/ 'to remain'.

/br/ Occurs in one syllable, before the climax. The contrast /br/: /pr/ is neutralized. The stop is lenis; /r/ as elsewhere.

/brif/ 'letter'; /brot/ 'bread'; /braUn/ 'brown';  
/braIxə/ 'to need', 'use'; /fɛ'brɔx/ 'broken'.

/dl/ Occurs bridging two syllables.

/adlɛr/ 'eagle'.

/dr/ Occurs in one syllable, before the climax. The contrast /dr/: /tr/ is neutralized. The stop is lenis; /r/ as elsewhere.

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<sup>45</sup> This is unusual. The clusters composed of a stop plus /r/ are otherwise restricted to one syllable, before the climax.



/draI/ 'three'; /draUs/ 'outside'; /drUf/ 'on it';  
/drat/ 'wire'.

/gl/ Occurs in one syllable, before the climax. /g/ is lenis:  
/l/ tends to be velarized on account of its proximity to  
/g/, but the following vowel has a greater effect on its  
velarity. Contrast /gl/: /kl/ is neutralized.

/glIk/ 'happiness'; /glidər/ 'limbs'; /glas/ 'glass';  
/glɔk/ 'bell'; /glaiX/ (I) 'like'.

/gr/ Occurs in one syllable, before the climax. Contrast  
/gr/: /kr/ is neutralized. The stop is lenis.

/gras/ 'grass'; /grab/ 'grave'(noun); /gro/ 'gray'.

The sequence /gəs/ results in many cases in a realization  
[gz] or [ks] before the syllable climax.

/gə'sUnt,haIt/ 'health'; /gəsUŋ/ 'sung'; /gəsɪŋs/  
'singing'(pejorative); /gəsət/ 'said'(past part.).

/tst/ Occurs in one syllable, after the climax.

/gəplatst/ 'burst'(past part.); /kratst/ 'scratches'(verb);  
/sItst/ 'sits'.

/tsv/ Occurs in one syllable, before the climax. The /v/ is  
often devoiced and it is lenis. [β]~[ϕ] is typical.

/tsve/ 'two'; /tsvɛlfə/ 'twelve'; /'tsvantsɪx/ 'twenty'.

/čt/ Occurs in one syllable, after the climax.

/plačt/ 'splashes'(verb).

/ft/ Occurs in one syllable, after the climax.

/šlaft/ (he) 'sleeps'; /kaUft/ (he) 'buys'; /laUft/ (he)  
'runs'.



/fs/ Occurs in one syllable after the climax.

/kaUfs/ 'buy it'.

/fšt/ Occurs in one syllable, after the climax.

/šlafšt/ 'sleep' (2nd pers. sing.).

/fl/ Occurs in one syllable, before the climax. /f/ is lenis; the nature of /l/ depends on the following vowel.

/flɛksə/ 'to flex'; /flɪnt/ 'rifle'; /flɔk/ 'flea';

/fligə/ 'to fly'; /flɪkə/ 'to patch'.

/fr/ Occurs in one syllable, before the climax. /f/ is lenis; /r/ as elsewhere.

/fraɪnt/ 'friend'; /,fran'tsesɪš/ 'French'; /fra/  
'woman', 'wife'.

/st/ This cluster is of rare occurrence outside the 3rd person singular, pres. indic. of verbs which have /s/ before the inflection.

/ɪst/ 'is'<sup>46</sup>; /ɪst/ 'east'; /vɛst/ 'west'; /'ɛstə,rɪx/  
'Austria'; /past/ 'fits'(verb); /last/ 'lets'(verb);  
/šɪst/ 'shoots'(verb).

/šp/ Occurs in one syllable, before the climax. The cluster is lenis. The /p/ may be voiced before voiced sounds.

/špatɛə/ 'sparrow'; /'špɛk,maʊs/ 'bat'; /špat/ 'late';  
/špas/ 'fun'; /špaɪxət/ 'loft', 'granary'.

/špr/ Occurs in one syllable, before the climax. /šp/ is lenis, /p/ sometimes voiced.

/šprɛxə/ 'to speak'; /šprɪŋə/ 'jump'; /šprɪɛst/ 'splashes'.

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<sup>46</sup> The normal form of this verb is /ɪs/. The present form may reflect Standard German.



/št/ Occurs in one syllable, both before and after the climax. Before the climax the cluster is lenis; /t/ may be voiced before voiced sounds. After the climax, it is fortis after short vowels and lenis after diphthongs.

Before:

/štork/ 'stork'; /šte/ 'stones'; /štUm/ 'dumb'; /štil/ 'chairs'; /štIl/ 'quiet'; /štɔpət/ 'stopper'; /štark/ 'strong'; /štω/ 'stone'; /štemps/ 'postage stamps'.

After:

/mošt/ 'cider'; /pošt/ 'post office'; /,aU'gUšt/ 'August'; /mIšt/ 'manure'; /gaIšt/ 'ghost'; /prošt/ 'simple', 'common'.

Also occurs bridging two syllables.

\*/gaIštə/ 'ghosts'.

/štr/ Occurs in one syllable, before the climax. The /št/ is lenis.

/štrigəl/ 'curry comb'; /štraItə/ 'to quarrel'; /štraIx/ 'trick', 'prank'; /štraUs/ 'bunch' (of flowers); /'štrak,aUs/ 'straight ahead'; /štregəl/ 'hair comb'.

/šv/ Occurs in one syllable, before the climax. The cluster is lenis. /v/ may be devoiced.

/'švalbən,švants/ 'dove tail'; /švax/ 'weak'; /sver/ 'difficult', 'heavy'; /'švebIš/ 'Swabian'.

/šm/ Occurs in one syllable, before the climax. /š/ is lenis.

/šmire/ 'to spread'; /šmaIsə/ 'to throw'.





- /šn/ Occurs in one syllable, before the climax. /š/ is lenis.  
/šnaUfə/ 'to breathe'; /šnaIdə/ 'to cut'; /šnel/  
'quick', 'quickly'.
- /š/ Occurs in one syllable, before the climax. /š/ is lenis.  
/šnaUfə/ 'to breathe'; /šnaIdə/ 'to cut'; /šnel/ 'quick',  
'quickly'.
- /šl/ Occurs in one syllable, before the climax. /š/ is lenis.  
/šlafə/ 'to sleep'; /šlaUx/ 'hose'; 'clever'; /šlaŋ/  
'snake'.
- /šr/ Occurs in one syllable, before the climax. /š/ is lenis.  
/šrIt/ 'step' (noun); /šraŋk/ 'cupboard'; /šraIbə/ 'to  
write'; /'šraIp,təbəl/ 'handbag'.
- /xt/ Occurs in one syllable, after the climax. /x/ in posi-  
tional variants and tension as elsewhere. /t/ lenis.  
/naxt/ 'night'; /laIxt/ 'easy', 'light'; /laxt/ 'laughs'  
(verb).

Also occurs bridging two syllables.

/ 'vaI,naxtə/ 'Christmas'; /axtə/ 'eight'; /gə'šIxtə/  
'story'; /lIxtər/ 'altar candles'.

- /mp/ Occurs in one syllable, after the climax. /p/ is lenis.  
/damp/ 'steam'; \*/štəmp/ 'postage stamp';

Occurs bridging two syllables.

/štəmpə/ 'to stamp' (with the feet).

- /mps/ Occurs in one syllable, after the climax.  
/štəmps/ 'postage stamps'.



/mt/ Occurs in one syllable after the climax. /t/ is lenis.

/kUmt/ 'comes'; /švInt/ 'swims'; /gətrəmt/ 'dreamt'  
(past part.).

/mb/ Occurs bridging two syllables. /b/ is lenis.

/,sɛp'tɛmbɐ/ 'September'; /,nɔ'fɛmbɐ/ 'November';  
/,dɛ'tsɛmbɐ/ 'December'; /'grUm,bɛrə/ 'potatoes.

/mf/ Occurs in one syllable, after the climax. /f/ is lenis.

\*/'fImf,naxt/ 'five nights'.

Also occurs bridging two syllables.

/fImfə/ 'five'.

/nt/ Occurs in one syllable, after the climax. /t/ is lenis.

/rent/ (it) 'is raining'<sup>47</sup>; /šɛnt/ 'grumbles at';  
/kInt/ 'child'; /vInt/ 'wind'; /flInt/ 'military rifle';  
/rInt/ 'head of cattle'; /gə'sUnt,həIt/ 'health';  
/fraInt/ 'friend'; /grUnt/ 'ground', 'soil'; /pUnt/  
'pound' (weight).

Also occurs bridging two syllables. /t/ may be voiced.

/vIntər/ 'winter'.

/nd/ Occurs bridging two syllables. /d/ is lenis.

/vIndIx/ 'windy'; /kIndər/ 'children';<sup>48</sup> /Undər/ 'under'<sup>48</sup>;  
/'hɔ,lɛndər/ 'Dutchman'; /'ɛndərIx/ 'drake'.

/nts/ Occurs in one syllable, after the climax. /ts/ is lenis.

\*/vantɛs/ 'bug'; /'ɔ,mɛnts/ 'ant'; /švantɛs/ 'tail'.

Also occurs bridging two syllables. /ts/ is lenis.

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<sup>47</sup> Also heard in the form: /regənt/.

<sup>48</sup> /Undər/, /kIndər/ ~ /Unər/, /kInər/.



/vantʂə/ 'bugs'; /,fran'tʂezɪʃ/ 'French'; /'o,mentʂə/  
'ants'.

/ns/ Occurs in one syllable after the climax. These forms often result from the contraction /s/ from /ɛs/ 'it' or from /das/ 'the'. /s/ is lenis. Excrescent [t] is likely.

/pakəns/ (we) 'pack it'; /brɒɪxəns/ (we) 'use it';  
/ɪns/ 'into the'; /gans/ 'goose'.

Also occurs bridging two syllables. Possible voicing of /s/.

/gansərt/ 'gander'

The following forms contain [ŋ] as an allophone of /n/:

/'Un,glaʊbɪx/ 'unbelieving', 'atheistic'; /'Un,glɪk/  
'misfortune'; /'blumən,kaxəl/ 'flower pot'.

/ŋk/ Occurs in one syllable, after the climax. /k/ is lenis.

/baŋk/ 'bench'; /bɛŋk/ 'benches'; /blaŋk/ 'fence-board';  
/gəðɛŋk/ (I) 'remember'.

Also occurs bridging two syllables. /k/ usually voiced.

/trɪŋkə/ 'to drink'; /ʃtɪŋkə/ 'to stink'; /blaŋkə/  
'fence boards'; /hɪŋkəl/ 'chicken'.

/ŋs/ Occurs in one syllable, after the climax. /s/ is lenis.

/gəsɪŋs/ 'singing' (pejorative);  
/fɛ'gresə,rʊŋs,glas/ 'telescope'.

/lp/ Occurs in one syllable, after the climax. /p/ is lenis.

The /l/ is strongly velar.

/kalp/ 'calf'; /halp/ 'half'; /kɒlp/ 'corn cob'.





/lt/ Occurs in one syllable, after the climax. /t/ is lenis.  
 /fɛlt/ 'field', 'soil'; /kalt/ 'cold'; /alt/ 'old';  
 /gəvɔlt/ 'wanted' (past part.); /gɔlt/ 'gold'; /vɪlt/  
 'want' (2nd pers. sing.); /kvɛlt/ 'oozes'.

Also occurs bridging two syllables. /t/ may be voiced.  
 /,altər 'hut/ 'old hat'.

/lk/ Occurs in one syllable, after the climax. /k/ is lenis.  
 /vɔlk/ 'cloud' (noun); /balk/ 'beam' (noun).

Also occurs bridging two syllables. /k/ may be voiced.  
 /balkə/ 'beams' (noun); /vɔlkə/ 'clouds' (noun); /mɛlkə/  
 'to milk'.

/lb/ Occurs bridging two syllables. /b/ is lenis.  
 /'švalbən, švantes/ 'dove tail'; /sɪlbər/ 'silver'.

/ld/ Occurs bridging two syllables. /d/ is lenis.  
 /,sɔl'datən, kap/ 'helmet'.

/lɛs/ Occurs in one syllable, after the climax.  
 /saltɛs/ 'salt'; /hɔltɛs/ 'wood'.

/lf/ Occurs in one syllable, after the climax. /t/ is lenis.  
 /hɛlf/ 'help' (imperative); /ɛlf/ 'eleven'<sup>49</sup>; /tɛsvɛlf/  
 'twelve'.<sup>49</sup>

Also occurs bridging two syllables. /f/ may be voiced.  
 /ɛlfə/ 'eleven'; /tɛsvɛlfə/ 'twelve'; /hɛlfə/ 'to help'.

/ls/ Occurs in one syllable, after the climax.  
 /hɔls/ 'fetch it',<sup>50</sup>

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<sup>49</sup> These forms appear when followed by a plural noun; a final schwa is heard when the number is a single or final utterance.

<sup>50</sup> An excrescent [t] is present here: [ho<sup>ə</sup>lts].



Clusters beginning with /r/. For discussion of these see Introduction, page 39. Tension of the stop is fortis, unless otherwise stated.

/rp/ In one syllable:

/kɔrp/ 'basket'

Bridging two syllables:

/kɛrpɐr/ 'body'.

/rt/ In one syllable:

/fɔrt/ 'away'; /fɛrt/ 'horse'<sup>51</sup>; /nɔrt/ 'north';

/'mɪsgə,burt/ 'dwarf'; /hart/ 'hard'.

Bridging two syllables:

\*/,hartəs 'flaɪʃ/ 'tough meat'; /gartə/ 'garden'.

/rk/ In one syllable:

/ʃtark/ 'strong'; /ʃtɔrk/ 'stork'; /mɛrk/(I) 'notice'.

Bridging two syllables:

\*/,ʃtarkə'mɛnɐr/ 'strong men'; /mɛrkə/ 'to notice'.

/rb/ Bridging two syllables; /b/ is lenis and may become a spirant [β].

/ʃɛrbəl/ 'sherd'; /kɛrbəs/ 'pumpkin'.

/rd/ Bridging two syllables: /d/ is lenis and may become a spirant [ð].

/mɔrdɐr/ 'murderer'; /'aʊsgə,maxt'verdə/ 'to be put out'.

/rts/ /r/ plus affricate. In one syllable:

/mɛrts/ 'March'; /kʊrts/ 'short'.

Bridging two syllables:

/'fɪrtsɪx/ 'forty'; \*/,kʊrtsə 'təɡə/ 'short days'.

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<sup>51</sup> /gaʊl/ is the usual term for horse.



/rf/ In one syllable:

/dɔrf/ 'village'; /šarf/ 'sharp'.

Bridging two syllables:

/dɛrfɛr/ 'villages'; /sɛrfə/ 'to sharpen'.

/rš/ In one syllable:

/bUrš/ 'chap', 'fellow'; /kIrš/ 'cherry'.

Bridging two syllables:

/bUršə/ 'chaps', 'fellows'; /kIršə/ 'cherries'.

/rx/ In one syllable:

/kIrx/ 'church'; /dUrx/ 'through'.

/rm/ In one syllable:

/varm/ 'warm'; /arm/ 'arm', 'poor'; /tUrm/ 'tower' (noun).

Bridging two syllables:

/armə/ 'arm' (dat.)

/rn/ In one syllable:

/štern/ 'star'.

Bridging two syllables:

\*/šternə/ 'stars'.

/rl/ In one syllable:

/kɛrl/ 'chap', 'fellow'.

Bridging two syllables:

/'ur,laUp/ 'leave', 'furlough'; \*/kɛrlə/ 'chaps', 'fellows'.

The following clusters are not referred to in the introduction, which deals with clusters composed of /r/ plus only one consonant. Where the /r/ is [ř] or [ʀ], the following member of the cluster is fortis but not neces-



sarily the third or fourth. Usually, however, the /r/ is realized vocalically and the raising to fortis tension of following sounds less frequent. Except for /ršt/, the following clusters appear to be fairly rare.

/rps/ Bridging two syllables. Division between /p/ and /s/.  
/ɛrpsə/ 'peas'.

/rts/ In one syllable after the climax:  
/'vIrts,haUs/ 'inn'.<sup>52</sup>

/rkšt/ In one syllable, after the climax:  
/merkšt/(you) 'notice' (2nd pers.sing.).

/ršt/ In one syllable, after the climax:  
/tsu,eršt/ 'at first'; /beršt/ 'brush' (2nd pers.sing.);  
/veršt/ 'sausage';<sup>53</sup> /faršt/ 'travel', 'drive' (2nd pers.sing.).

Also bridging two syllables. Division between /š/ and /t/:  
/bIrštə/ 'to brush'; \*/verštə/ 'sausages'.

/rxj/ Bridging two syllables. Division between /x/ and /j/.  
/mɛrxjə/ 'fairy story'.

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<sup>52</sup> Phonemically there is no affricate here. Cf. p. 30.

<sup>53</sup> /veršt/ ~ /vUršt/





## CHAPTER IV

### CONCLUSIONS

#### A. FINDINGS

##### 1. Significant features.

(a) A surprising feature of the vowel system of this idiolect is the correlation of long length with lax tension, and normal or short length with tenseness, i.e. /i/, /e/, /a/, /ɔ/, /o/, and /u/ are lax, while /I/, /ɛ/, /a/, /ɔ/, and /U/ are tense.

This contrasts with Standard German, in which [e] and [i] are tense, [I] and [ɛ] are lax. Similarly in English the diphthong in [me<sup>I</sup>t] 'mate' is tenser than the vowel in [mɛt] 'met'.

The phoneme /a/ is less tense than the other normal length front vowel phonemes. This is understandable when one considers that its contrast with /a/ can be maintained by other features, namely position, length and rounding. The relative importance of tension is reduced.

This contrast of systems between the idiolect on one hand and English and German on the other, extends to the back vowels.

(b) The feature of nasalization is characteristic and easily recognizable. It is most significant when occurring as coarticulation with final vowels (e.g. /bɔ̃/ 'legs').

(c) Rounding is rarely present in front vowels allophones and never absent in back vowels allophones. The low central



vowel /a/ varies in the intensity of rounding, the more rounded variants being more retracted.

(d) Quite the most striking feature of the consonants is the appearance of a spirant allophone of the voiced stops between vowels. Its occurrence is, however, partly conditional upon a long vowel or diphthong preceding.

(e) The loss of phonemic contrast between /p/:/b/, /t/:/d/ and /k/:/g/ in initial position is another important feature.

(f) Due to the tenseness of normal or short vowels, the following stops are fortis, unless they are voiced. In that case they are lenis.

(g) These features when considered together give, among others, the following typical sequences:

	vowel phoneme		realiza- tion	stop phoneme		
	<u>descrip- tion</u>	<u>tension</u>		<u>co-articu- lation</u>	<u>tension</u>	
(a)	short	tense	stop	voiceless	fortis	schwa
(b)	normal	tense	stop	voiced	lenis	vocalic consonant
(c)	normal	tense	spirant	voiced	lenis	schwa
(d)	long	lax	spirant	voiced	lenis	schwa
(e)	diphthong	lax	spirant	voiced	lenis	schwa

Examples:

- (a) /šŮtər/ 'rubble'; /mŮtər/ 'mother'.
- (b) /hIbəl/ 'hill'; /rɔgən/ 'rye'.
- (c) /habə/ 'pot', 'saucepan'; /šIdə/ 'to pour'.
- (d) /bibəl/ 'Bible'; /gedə/ 'to weed'.
- (e) /plaŮdərə/ 'to chat'; /vaIdər/ 'father'.



## 2. Analysis of Clusters.

- (a) Clusters including stops. The stop is usually the second element. Common in this group are /št/, /nt/ and /r/ plus stop.
- (b) Clusters including affricates are not of high frequency.
- (c) Clusters including spirants.
  - (i) as first element:
    - spirant + stop. /št/ is the most common.
    - spirant + nasal. /š/ begins such clusters.
    - spirant + lateral. Only /f/ and /š/ participate.
    - spirant + trill. Only /f/ and /š/ participate.
  - (ii) as second element:
    - Commonest after nasals, laterals and trills.
- (d) Clusters including nasals.
  - (i) nasal + homorganic stop or spirant.
  - (ii) spirant or trill + nasal.
- (e) Clusters including laterals.
  - (i) lateral + stop or spirant.
  - (ii) stop(except /d/ or /t/) + lateral; spirant (only /š/ or /f/) + lateral.
- (f) Clusters including trills are the most frequent.
  - (i) As first member of a cluster a trill combines with all other consonants except /h/, /ŋ/, /j/.
  - (ii) As second member of a cluster a trill combines with all other consonants except /x/, /h/, /ŋ/, /j/.
- (g) Number of phonemic elements. Those clusters with two elements form the vast majority. Only seven tri-partite





clusters were recorded, two of which (/štr/ and /špr/) occur before the climax, and the rest after.<sup>1</sup> Three of these five were recorded only in one syllable, but they appear to be of a type that has the possibility of bridging two syllables.

Disregarding freak clusters, resulting from the juxtaposition of lexemes, the longest cluster recorded was /rkšt/, occurring in one syllable after the climax.

- (h) (i) Clusters beginning with stops are usually in one syllable, before the climax.
- (ii) It is interesting to note that no voiced spirants begin clusters; those clusters beginning with voiceless spirants are usually found in one syllable before the climax. The common exception here is /št/, which may appear in one or two syllables, before or after the climax.
- (iii) Clusters beginning with nasals, laterals and trills occur after the climax. Those with a voiced stop as second element occur only spanning two syllables. The rest possess the characteristic of appearing not only in one syllable but also bridging two.

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<sup>1</sup> A cluster /špl/ presumably also exists but was not recorded. Like /špr/ and /štr/ it would occur before the climax.



### 3. Origin of dialect.

The sketch-maps show the present geographic distribution of dialect features in Germany which are relevant to this study. If we assume the linguistic boundaries to be in approximately the same position as at the time of the German settlement of Galicia, we have some idea of the areas from which the settlers came.

On the maps, the word occurring first in the designation of a boundary, characterizes the dialects to the north.

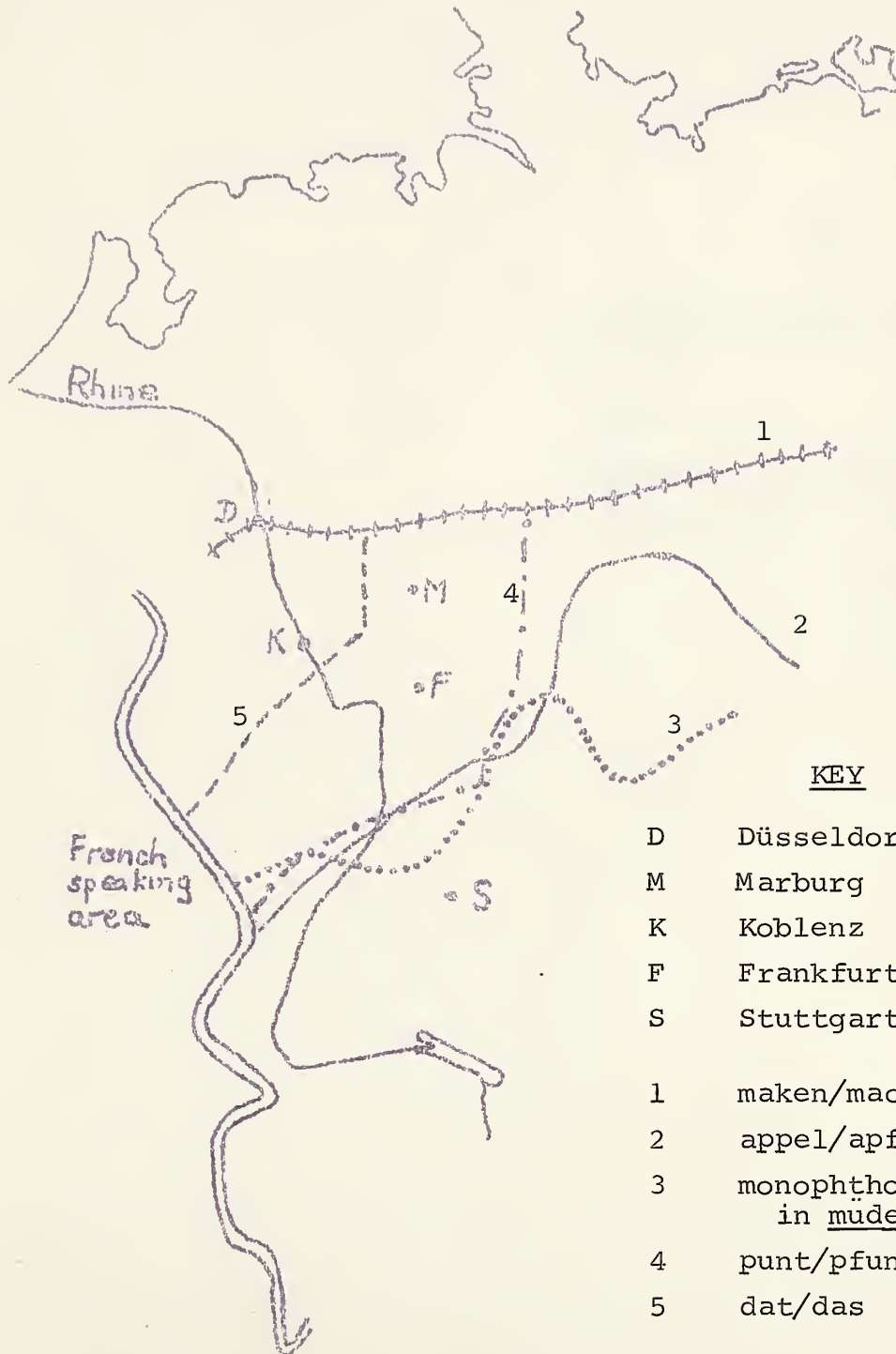
If we look on map 1, we can localize certain features of the idiolect under examination: /maxə/ 'to make'; /ɛpəl/ 'apples'; /mit/ 'tired'; /pʊnt/ 'pound'(noun); /das/ 'that'. These forms would be found in the area centering on Frankfurt.

Map 2 throws light on the origin of the following forms: /gaʊl/ 'horse'; /trɪŋkə/ realized as [drɪŋgə] 'to drink'; /ʃen/ realized as [šɛ<sup>ə</sup>,n] or [šɛ<sup>ə</sup>] 'beautiful'; /aɪx/ 'you'(2nd pers.pl.); /haʊs/ 'house'; /fɛšt/ 'tight', 'fast'. The distribution of /gaʊl/, /aɪx/ and /haʊs/ does not disturb the impression gained from map 1, that the Frankfurt area is centrally concerned. However, [drɪŋgə], [šɛ<sup>ə</sup>] and /fɛšt/ give evidence that the idiolect has elements originating further south, in the Stuttgart area.

Another characteristic feature of this idiolect is the diphthong /ɔi/ and the vowel /ʊ/ which is usually accom-



MAP 1



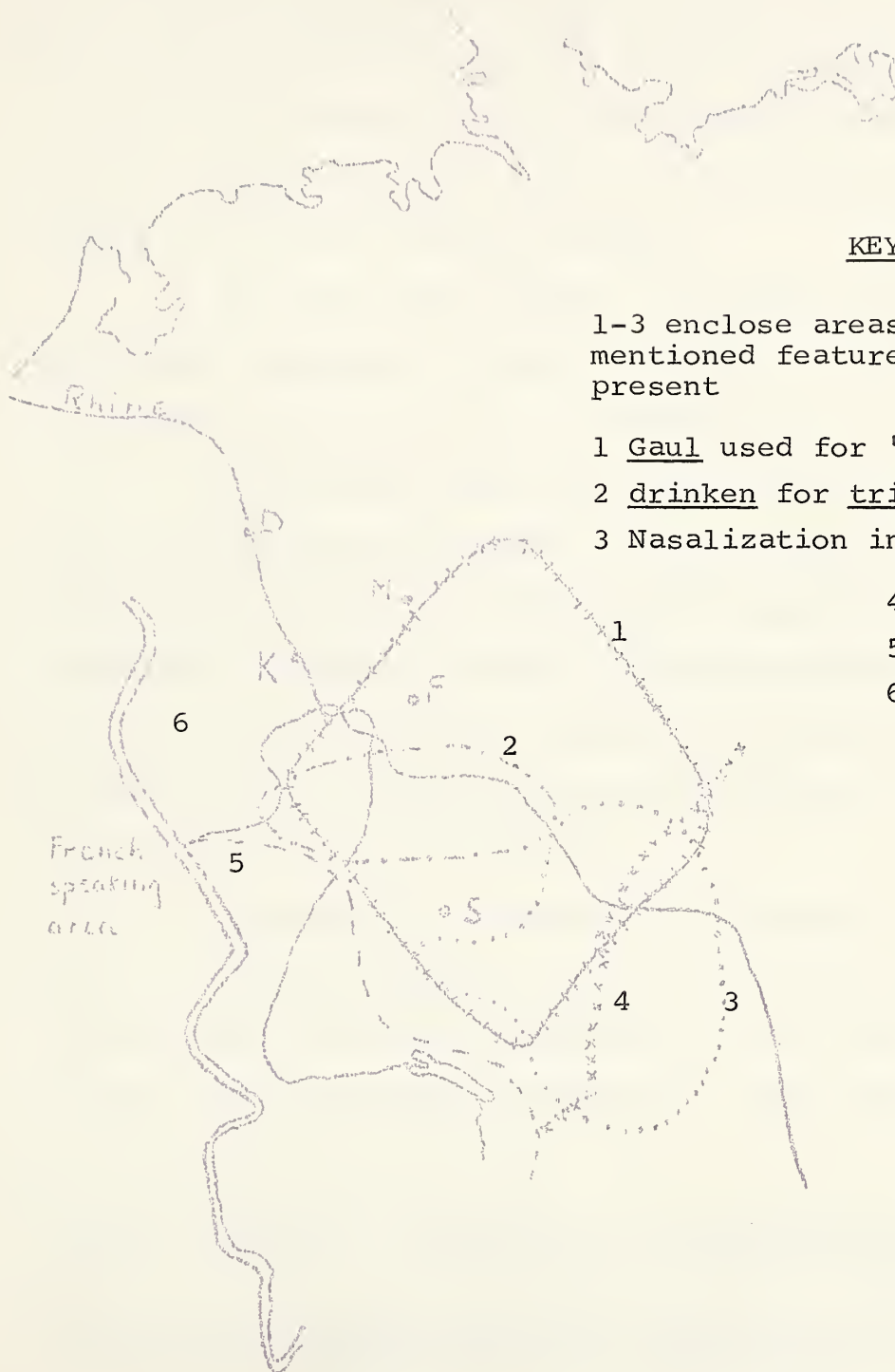
KEY

D	Düsseldorf
M	Marburg
K	Koblenz
F	Frankfurt
S	Stuttgart

- |   |   |
|---|---|
| 1 | maken/machen                                    |
| 2 | appel/apfel                                     |
| 3 | monophthong/diphthong<br>in <u>mude</u> (tired) |
| 4 | punt/pfunt                                      |
| 5 | dat/das   |



MAP 2



KEY

1-3 enclose areas in which the mentioned feature or form is present

1 Gaul used for 'horse'

2 drinken for trinken 'to drink

3 Nasalization in schön 'beautiful'

4 euch/enk

5 haus/hus

6 fest/fescht





panies by an off-glide. Gumperz,<sup>2</sup> in the phonology of a Swabian dialect, posits a phoneme /oI/ which corresponds partly to /oi/ and partly to /ω/ or /ɰ/ in this idiolect. Furthermore, Weise<sup>3</sup> places this diphthong in East Swabian and mentions nasalization as characteristic of Swabian in general. This dialect is spoken in the area roughly corresponding to the area around Stuttgart.

The forms /eš/ 'ashes' and /vešə/ 'to wash' are not only found in Swabian but also in Rhenish Frankonian, spoken in an area including that around Frankfurt.

Weise also states that such forms as [keřx] for /kIrx/ 'church' and [eř] for /ir/ 'you' are part of West Middle German, which includes Rhenish Frankonian. To this same dialect belongs also the distinctive feature of the loss of the contrast /t/ : /d/. The spirant allophone of /b/ and the form /fix/ 'cattle' have wide distribution, including the Frankfurt area but not Stuttgart.

It would be misleading to conclude this brief examination of the provenance of Galician German without allaying the impression that we are dealing with two separate origins for the German settlement of Galicia. This impression is

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<sup>2</sup> John J. Gumperz, "The Swabian of Washtenaw County" unpub. diss. (University of Michigan, Ann Arbor, 1954).

<sup>3</sup> Oskar Weise, Unsere Mundarten, ihr Werden und ihr Wesen, (Berlin and Leipzig, 1919), pp. 239 and 243.



difficult to avoid in presenting the material, because an important bundle of isoglosses runs north-east between Frankfurt and Stuttgart, namely the dialect boundary between Middle German and Upper German. There is nothing in the evidence to suggest a concentration of colonization recruitment at any points within the total area including Frankfurt and Stuttgart.

#### B. FURTHER STUDY

1. It is known that Galician families settled not only in Stony Plain, but also in Neudorf, Saskatchewan, as well as in the Beaver Hills district near Edmonton. The Lutheran congregation at Stony Plain mothered others, among which are those at Beach Corner, Golden Spike and Spruce Grove. To judge from census figures, other originally Galician settlements undoubtedly exist. It would be a rewarding task to locate such settlements and complete the picture of Galician German in its second remove from native soil.

2. The present study is restricted largely to one informant in Stony Plain. Clearly, it should be enlarged to other informants in that community, before we can safely speak of the features of a dialect. Furthermore, no linguistic study is complete without an examination of the morphology and syntax. In this case an appraisal of the influence of English would also be desirable.

3. Since two centuries have elapsed since the



peopling of Galicia with speakers of German, one might expect that certain forms still live on in this fading local speech, which have died out in the main stream of the dialects on German soil.

This appears to be the case with forms such as /vaIdər/ [vaIdəř] 'farther'; /ladər/ [ladəř] 'ladder'; /tsaIdUŋ/ [tsaIdUŋ] 'newspaper'.

Weifert in his study of a linguistic island in Slavonic territory mentions that Hessian [r] for intervocalic [t] in Standard German is a new development; the old folk say [d].<sup>4</sup> Since the standard forms of the above examples are with [t], namely [vaItər], [laItər] and ['tsaItUŋ] and since Hessen is, on another linguistic evidence already discussed, a likely district of origin of some of the German settlers in Galicia, [d] is in these cases probably a relic feature.

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<sup>4</sup> Ladislaus Weifert, Die Mundart von Vršac (Werschetz) (Belgrade, 1935).





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1931.



APPENDIX A

TABLES OF PHONETIC SYMBOLS

Vowels

	front		central		back
high	i	y			u
lower high	I	Y	ɨ	ʉ	U
higher mid	e		ə		o
lower mid	ɛ	œ			
higher low	æ	a			ɔ<.....ɔ
low		ˌa	a		ɒ

In the above table, where a symbol is used in a slightly different place from that assigned by customary usage, a dotted arrow indicates the shift.

Diphthongs

[a<sup>U</sup>], [a<sup>U</sup>], [a<sup>ʉ</sup>], [a<sup>ɨ</sup>], [a<sup>I</sup>], [ɔ<sup>I</sup>]

The second element of these diphthongs is written above instead of on the line to indicate that it is the less stressed of the two.



# Consonants

	Bi-labial		Labio-dental		Dental		Gingivo-alveolar		Palato-alveolar		Post-palatal		Velar		Faucal	
	Vl	Vd	Vl	Vd	Vl	Vd	Vl	Vd	Vl	Vd	Vl	Vd	Vl	Vd	Vl	Vd
Stops	p	b	t	d	t	d			k	g			k	g		ʔ
affricates					ts		tʃ									
spirants	ɸ	β	f	v	s	z	ʃ		ç		ʒ		x		h	ɦ
nasals		m				n					ɲ			ŋ		
lateral <sup>1</sup>						l										
trills <sup>2</sup>					ʀ											
semi-vowels											j					

<sup>1</sup> The velarized lateral is symbolized thus: [ɭ]

<sup>2</sup> Various types of "r" are as follows:

- [ʀ] - the apex of the tongue vibrates, causing intermittent occlusion, i.e. trill.
- [r] - The apex of the tongue is held near to the alveolus but without causing audible friction;
- [ɾ] - similar to [r] but friction is heard;
- [ʁ] - the apex of the tongue makes only one or two vibratory cycles.





# Diacritics and other symbols

Symbol	E x p l a n a t i o n	Example
[ ]	used to enclose phonetic symbols	[p]
:	vowel above normal length	[fɪ:s]
˘	vowel less than normal length	[šɤ̘p]
ɤ̞	increased labialization or rounding	[ɤ̞βə]
—	spreading	[œ̞stə, rɑ̞ <sup>I</sup> ç]
.	tense	[bɛ̞t]
˘	lax	[šdɛ̘:lə]
^	vowel raised slightly	[lɛ̞^:p]
˘	vowel dropped slightly	[šɛ̘˘řfə]
<	vowel fronted slightly	[h <:z]
>	vowel retracted slightly	[ʁɑ̞>:p]
ə̞	centering offglide	[ɛ̞:ə̞ɪ]
o̞	voiceless	[dɔ̞ktə̞ř]
˘	fronted point of articulation	[sɪ̞ŋə̞]
˘	nasalized	[mɑ̞˘]
˘	fortis tension	[bɛ̞t̞]
˘	semi-lenis tension	[šɪ̞f̞]
˘	lenis tension	[kle̞.βə̞]
~	varying with	[ɪ̞:]~[ɪ̞:ə̞]
∅	zero, no sound	[ə̞]~[∅]
/ /	used to enclose phonemic symbols	/ˈo̞,ments/
ˈ ,	primary and secondary stress; these marks are placed before the syllable; tertiary stress is not marked	/ˈo̞,ments/ /ˈo̞,mentse/



Symbol	E x p l a n a t i o n	Example
⌢	two phones produced with no break in articulation or adjacent similar phones resulting in extra length	[haUt⌢drUf] [vaɾm⌢maxə]
ˈ	released with slight aspiration	[betˈ]
ˊ	unreleased	[haUtˊ]
:	contrasting with	/f/: /v/
˘	nasal release	[řog˘n]
˙	lateral release	[sat˙l]
+	open juncture	[nɛks+təs]
‡	glottalized open juncture	[nɔ̃‡In]
1,2,3,4	represent four pitch levels	} [š̌ta <sup>1</sup> Uf <sup>3</sup> ]
1+,2+,3+	represent intermediate pitch levels	
ˈ	most or second most prominent syllable in a macrosegment	} [š̌ta <sup>1</sup> Uf <sup>3</sup> ]
ˊ	third most prominent syllable in a macrosegment	
˙		} analogous to the above
	end of macrosegment	3 1‡ 2
	slight pause in speech	nɔ̃ Ix
	longer pause in speech	ksie  dan
*	hypothetical form	*/gaIš̌tə/



APPENDIX B

Transcription

The following two passages were recorded on tape, then transcribed. The first passage was taped with no third person in the room. The informant was speaking only to the writer. The pronunciation and the forms used are more likely to be influenced by Standard German than those in the second passage, which was spoken in the presence, not only of the writer but also of three relatives.

Since naturalness was desired in the recorded speech, no writing was done while the informant was speaking. This meant that the allophones of /b/ and /f/ ([β],[v] and [ϕ],[f]) were not recorded on the basis of observed lip position. The chief guide in this respect was previous experience.

The transcription of each speech sound is entered on three different lines as follows:

Line 1.: phonetic transcription including tension, juncture and word stress;

line 2.: transcription of intonation and sentence stress; division into macrosegments; the intonation numerals refer the pitch of the vowel directly above in line 1;

line 3.: the phonemic transcription of each sound is aligned as far as possible directly beneath the phonetic; word stress has been included again here;

line 4.: the translation; it was found impossible





to align the translation of each word regularly beneath the original, because the word order of English is different from that of German, and because idiomatic usage does not allow of literal translation.

Footnotes are assembled at the end of the second passage.



I.

1. nɔ:ə + nɔ ʔ In di ʃdɑ:tɪn + ʃɑːəm mɪˈ + sɛks + jɑ:ʀ |
2. 22+ | 2 | 2 + 2 2+ 2+ 2 2 2 3 2 |
3. n n In di ʃtɑtən varən mir sɛks jɑr |
4. No, no we were in the States for six years

1. Iˈ + mɪt' + mɑːm ʔ ɛːʃtɪn + mən || sɛks + jɑ:ə ||
2. 2 2 2 32 1 2 | 3 1 |
3. Ix mɪt mɑIm ɛrʃtən mən || sɛks jɑr ||
4. I with my first husband... six years.

1. dən + sɪˈ + hɪə ʔ ˈaʊf + ˈkʊm + dɪ + ˈhɑːm + ˈʃtɛd |
2. 2 2 2 2 2 | 2 3 1 |
3. dən sɪnt hir aʊfkʊm di ˈhɑIm, ʃtɛt |
4. Then we came up here ..... the homestead

1. wɑːʃt In + ˈsɑs + ˈkɑ ʃtɪwən | dɪ + ˈhɑːm + ˈʃdɛt || dən +
2. 23 2 2 2+ 2+3 | 1 3 1 | 2
3. vɑIʃt In ˈsas ˈkɑčIvən | di ˈhɑIm, ʃtɛt || dən
4. Do you know? In Saskatchewan? The homestead ( in-

1. hɑːbˈm + mɛː 1 | sɪˈm mɛ + dʊ ɛx | hɑːbˈm + hɑ ɪm | Iɪ +
2. 2 2 | 2 2 32 | 2 2 2 + | 2
3. habən mir<sup>1</sup> | sɪnt mir dʊrx | habən mir hɑIm | Is
4. complete we were through (incomplete utterance) utterance)



1. ma<sup>I</sup> + man + βi<sup>~</sup>ə nax + 'saskət' + ,sas + 'ka<sup>š</sup>İwə<sup>n</sup> |
2. 2 2+ 2+ 2+ 2 2 2 2+ 2+3 |
3. maI man vidər nax 'saskət ,sas 'kačIvan
4. My husband went again to Saskat... Saskatchewan

1. Un + ha<sup>n</sup>tne + 'hq<sup>ə</sup>m + ,šdet + 'a<sup>U</sup> + gə,nq<sup>^</sup>m + ə<sup>n</sup>əhat' +
2. 1 2 2 23 1 1 1 1 | 2 2 2+
3. Unt hat aInə 'haIm,štət 'aUfgə,nəm Unt er hat
4. and took up a homestead. And he had

1. φ<sup>I</sup>ə za>İn<sup>I</sup> b<sup>~</sup>i:ə + nq<sup>x</sup> Unzəren + φ<sup>ə</sup>:əə | Un <sup>I</sup> dan
2. 2 2 2 3 3 2 2+ 2 2 3 1 | 1 2
3. fir saInə brider nax Unsəren fader | Unt dan
4. it for his brothers and our father as well. And then

1. Is ə + βidə sə'rk<sup>??</sup>Um + nax + 'nq<sup>~</sup>ə<sup>??</sup>da'kə:da + də<sup>~</sup>
2. 2 2 2 2 2 2+ 2 2+ 1+ 2 1 | 1
3. Is er vidər tsə'rk,kUm nax 'nortda'kota da
4. he came back again to North Dakota that's

1. βq:rmI<sup>~</sup> e: b<sup>m</sup> + 'nq<sup>~</sup>ə<sup>??</sup>da'kə:da | də βq<sup>ə</sup>n + βI<sup>^</sup>ə bIs +
2. 1 1 1 1+ 1 1+ 2 1 | 2 2 2 2
3. varən mir eben 'nortda'kota | da varən vir bIs
4. where we were just then - North Dakota. We were there



1. nekʰs + tʰəs + ʰfri:ːjɑ:⁰ + nekʰs + tʰəs + ʰšbe:tʰjɑ:⁰ + ʰ
2. 2+ 2 3 1 | 2 1 3 1 | 1
3. nekstəs ʰfriːjɑr nekstəs ʰšpetːjɑr Unt
4. till next spring..... next autumn; and

1. dɑː˩ + sɪm+mɪʰ + fʊːtʰ Uf + ˌsasˈkaʃtʰwɑː˩ || βɑ:ʰ +
2. 1 1 1 1 1 1 2 1 1 | 1
3. dan sint mir fɔrt Uf ˌsasˈkaʃIvan || var
4. then we were off to Saskatchewan. There were

1. kɑ ɪnə ɡəbɑ ɪdɑ + ən + βɑ:ʰ + kɑ ɪn ʔ maɪ + bUʃ + βɑ:ʰ +
2. 2 2 1 2 | 1 2 2 | 1 3 2 |
3. kaInə ɡəbaIt Unt var kaIn | mal bUʃ var
4. no buildings and there were no... just bush there was,

1. ɑβəʰ + sʰzɑɪnɪ tsβɑɪ² + br̥i:ðəʰ + βɑ:⁰n + šʊ<ɪn + dɑ: +
2. 2 2 2 2 2+ 3 2 2 2 31
3. aber saInə tsval² brider varn šon da
4. but his two brothers had already been

1. ɡəβɛ:ː^zən³ ||
2. 1 2 1 |
3. ɡəvesən³ ||
4. there.





II.

1. ə hɛʃoːlə ɡəhat<sup>ʔ</sup> + n̩ hɑːns + 'dʊʁxgoːtso + ʊn də sɒːm +
2. 2 3 2 2 2 2+ | 2 2 3 2 3 | 2 2 2+
3. ə hexələ ɡəhat Unt hans 'dʊrxgoːtso Unt di samə
4. ...had a flax-comb and pulled it through and tore the

1. ɛrɑ ʊs + kʁɪs + mɪt<sup>ʔ</sup> də hən || ɛnt<sup>ʔ</sup> dən ɪst<sup>4</sup> ɛs + ə:: +
2. 2 3 1 2 2 2+1 | 1+ 2 2 2 1+
3. ,her'aʊsgə,rɪs mɪt di hent || Unt dan ɪst<sup>4</sup> ɛs ə
4. seed out by hand and then it was

1. ɡədʁɛʃ + vɛ<sup>ʔ</sup> t<sup>ʔ</sup> sɔːmə + n̩ + ɪs + βɛkəɡənɒm + βɔːdə |
2. 1+ 2+ 2 2 3 3 | 2 2 3 2 2 2 2+ 2+ |
3. ɡədʁɛʃ vɔrdə tsu samə Unt ɪs vɛkəɡənɒm vɔrdə |
4. threshed to seed and was taken away.

1. ʃtʁoːə + ,həmə'mɪsə + n̩ ʊs + n̩mə<sup>ʔ</sup> ɪns + ɸɛ<sup>ə</sup> t<sup>ʔ</sup> || hɑːns +
2. 322+ 2 2 2 2 1 2 2 2 31 | 1
3. ʃtro han mir mɪsə ,hɪn'aʊs,nɛmə ɪns fɛlt || hans
4. straw we had to take out into the field, had

1. mɪsə<sup>ʔ</sup> ʊfs + ɡʁɑːs + lɛ<sup>˘</sup> jə + n̩ + dɑs + ɡʁɑːs + ɪs +
2. 2 2 1+ 3 2 2+ | 2 2 2+ 2
3. mɪsə ʊfs ɡras lɛə Unt das ɡras ɪs
4. to lay it on the grass and the grass



1. gan+ 't sU: gə, βaks + ,mIt+ 'das məs + nœ t' + kəsI<sup>iə</sup> + hət<sup>e</sup> |
2. 3 31 1 1 | 1 1 1 3 3 2 1 |
3. gants tsUgəvaks mIt das mans net gəsio hat |
4. grew right over, so that you did not see it...

1. φərəba> t<sup>??</sup> d<sup>??</sup> + φi: <sup>ə</sup> + βoxə | ən dan hm<sup>?</sup> mə + di sI<sup>?</sup> cə<sup>?</sup> +
2. 1 1 1 3 2 1 1 | 2 2 2 2 2 3 3
3. for əbaUt draI fir voxə | Unt dan han mir di sIxəl
4. for about three or four weeks. And then we took the sickle

1. gənəm + n + mUst<sup>n</sup> + ge:ə εs + 'Uf+raφə + ra><sup>U</sup> s + rə<<sup>?</sup> zə +
2. 3 3 | 2 | 2 2 3 1 1 | 2 2 2 |
3. gənəm Unt mUstən geə εs 'Uf,raφə 'raUs,raIsə
4. and had to go to pick it up; tear it out,

1. n + 's<sup>z</sup> amə, bInə + n + t<sup>?</sup> sə' rIk<sup>?</sup> + ,brInə + bI<sup>^</sup> san dε +
2. 1 2 2 2 2 | 2 2 2 2 2 2 2
3. Unt tsusaməbInə Unt tsə' rIk, brInə bIsan di
4. and bind it up, and bring it back to the

1. řε<sup>^</sup> βəř || Unəm + ε>βər + βq<sup>ə</sup> n + grə: zə + lI<sup>?</sup> cə<sup>?</sup> + s<sup>z</sup> o
2. 3 1 | 2 2 2+ 3 2 3 3 31 1 | 2
3. rIbər || Untam rIbər varn groš lexər so
4. river. And at the river there were big holes as



1. gʁo:s + βI^ di + ša joř || qm̩mo + grɔ:sə + la:dʁə +
2. 3 2 2 2+ 1 | 1 1 2 2 2 2
3. gros vi di šaIər || han mir grošə ladərə
4. big as the barn. We laid big ladders

1. dʁyβəʁ + gəlɛ^:ət + Un hən zʁɛ + 'dʁUf + gə,šdɛlt + Un +
2. 2 2 2 2 2+ | 1 1 1 2 2 2 | 1
3. driber gəlet Unt han sIx 'drUfgəštelt Unt
4. over them and stood on them and

1. hʁ<:ns + 'dʁUf + gə,šdɛlt + ʔ,ɥ:nts + 'nebIxs + anəʁə + n + ʔ
2. 2 2 1 2 | 2 2 2 1 1 | 1
3. hans 'drUfgəštelt ɔns 'nebIxs anəʁə Unt
4. laid it on them one(row) beside the other and

1. ʔ,ɥ:nts + 'nebIxs + anəʁə | ʔUn dan ət + ha^b̩m̩mo + Unə +
2. 2 2 2 1 1 | 1 2 2 2 2 3 3
3. ɔns 'nebIxs anəʁə | Unt dan haben mir Unər
4. one beside the other. And then we made a

1. gant̩sIn dʁɛ + lox + ʔq<jeř + gemax | Unt<sup>??</sup>das Is gedʁIkelt + ʔ
2. 2 2 1 2 1 2 2 2+ | 1 2 2 2 3 1 |
3. gantes In das lox faIər gemaxt | Unt das Is getrikelt
4. fire right down in the hole. And it dried





1. Un dan + hən mɔs ə:: ? Is əs + gədrɪkəlt + Un əs + βər +  
 2. 1 2 2 2 1+ 1 1 1 2 2 | 1 1 1  
 3. Unt dan han mɪrs .... Is əs gədrɪkəlt Unt əs var  
 4. and then we ..... it dried, and there was

1. sɔ fɪ:lə + šmʊk + Un<sup>d</sup> + rɔɪx + das + mən nɛt<sup>?</sup> hət<sup>?</sup> drʊf<sup>?</sup>  
 2. 2 1 1 2 1 312 | 2 1 2 2 2  
 3. so file šmʊk Unt rɔɪx das man nɛt hət drʊf  
 4. so much smoke and fumes that you could not stand

1. + kənə + šte:ə + mən mʊstərʊnə + ge:ə | ʊbər ? ɛs Is +  
 2. 2 2 3 2 | 1 2 2 3 1 1 | 1 2 1 2  
 3. kənə šteə man mʊstə rʊnər geə | ʊbər ɛs Is  
 4. on them; you had to get off. But it did

1. nɛt<sup>?</sup> + fɛbrɛnt<sup>?</sup> ||  
 2. 1 2 31 |  
 3. nɛt fɛbrɛnt ||  
 4. not get burnt.

- 
- <sup>1</sup> /habən/ is probably the result of the influence of Standard German. One would expect /han/.
- <sup>2</sup> /tsvaɪ/ is again probably a manifestation of Standard German influence. One would expect /tsve/.
- <sup>3</sup> /varn.....gəvesən/ seems to be a Standard German form. A possible alternative would be /varn friər.../ 'were earlier'.
- <sup>4</sup> As above. /Is/ is usual in this idiolect.



APPENDIX C.

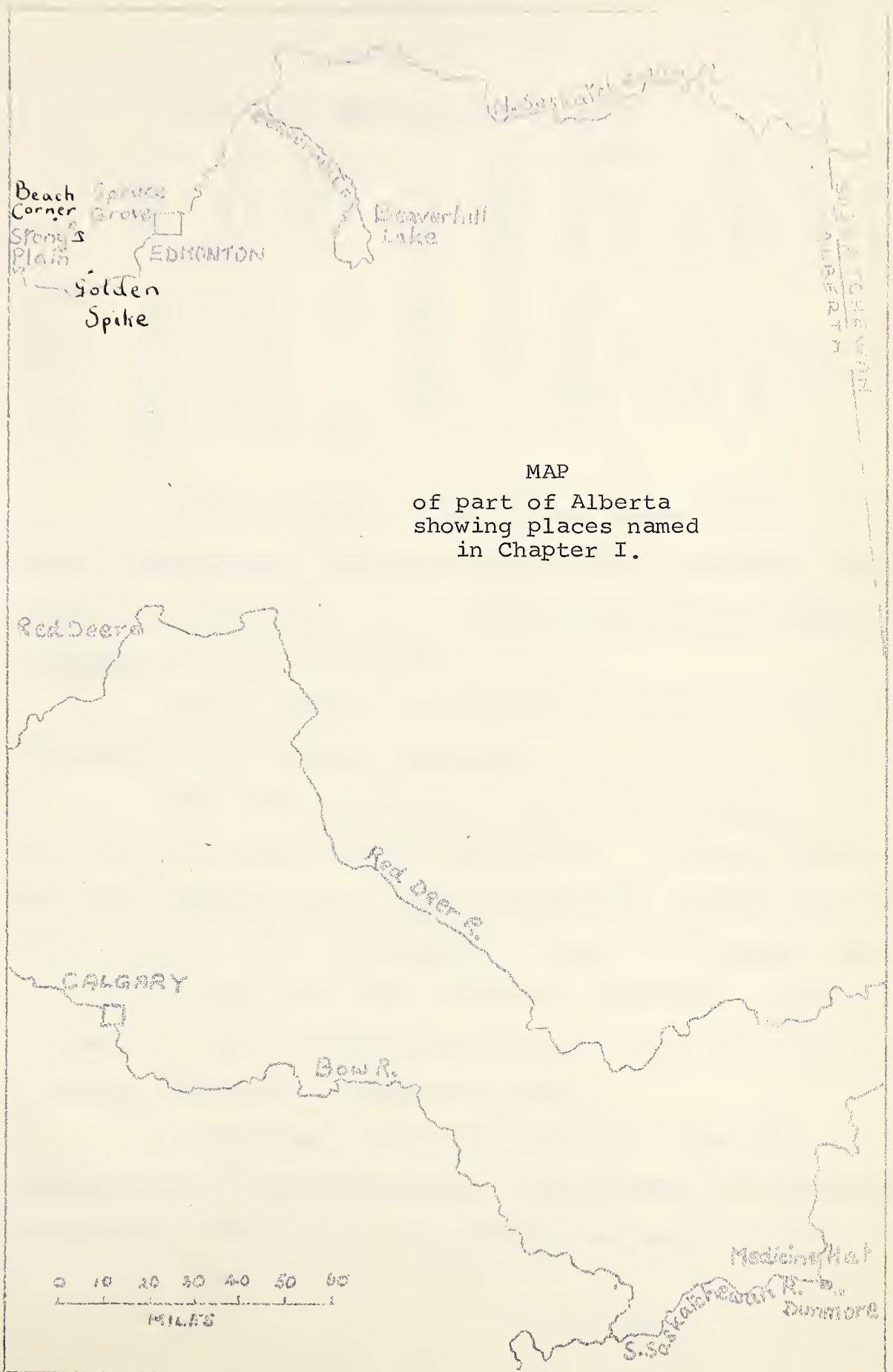


Boundaries after the Polish Partitions (1795). The Austro-Hungarian Empire extends north-east beyond the Carpathians to include, among other lands, Galicia, of which the capital is Lviv (Lemberg).

from G.W. Simpon, Ukraine; an Atlas of its History and Geography (London, Toronto, New York, 1941), Map 10.



APPENDIX D.







APPENDIX E.

Census Statistics on Stony Plain

Date	Popula- tion	Lutheran (Census)	No. in Luth. Congreg.	National origin							
				German	Austrian	British	Polish	Scand.	Ukrai- nian	Russian	French
1901	651	555	449	588	3	68	-	-	-	7	2
1911	505	323		336	3	82	-	16	-	-	9
1921	360	212		71	74	110	49	9	14	19	3
1931	497	250		295	5	136	3	17	11	3	3
1941	566	260		326	-	168	7	16	20	2	3
1951	878	414									
1961	1098		857								

The two figures in the column headed "No. in Luth. Congregation" are from church records; all others are from the official censuses of Canada and editions of Canada Year Book for the years given.

Where a space is left blank, the figure was not available in the sources consulted.

The census for 1901 uses the term "Stonyplain Centre"; later censuses use "Stony Plain." This may explain why there appears to be a drop in population between 1901 and 1911; in fact, there is probably a change in the census district.

For 1901 and 1911 "Austrian" should read "Austro-Hungarian." This national group includes "Galicians" who are strongly represented in Alberta in 1911.

It is strange that for these years, when the classification "Austro-Hungarian" was available, the Galicians should have been entered in the census as Germans. This





difficulty of classifying Austro-Hungarians in a table of racial origins, no doubt, stems from the fact that the term stands for a political, not a racial entity.

The figure for the German element of Stony Plain for 1921 is remarkably low. There is a smaller drop in the entire population of the town and in the Lutheran population. This may perhaps be accounted for by the wish of many people to dissociate themselves from Germany because of the Great War; the theory is supported by the high totals for "Austrian," "Polish," and "Russian"--totals which are neither preceded nor followed by any nearly so high. It may be significant that 1921 was the year of the bitter dispute over the closing of the Lutheran school. We may be sure the release of daughter congregations was not responsible for such a drop, for these are formed in areas where there is already resident a sufficiently large number of church members to make a congregation; there is no mass movement from the parent community. The war may well have caused a slight drop, but the given figure of 71, representing less than a quarter of the previous census figure, makes one suspect an obscuration of the real situation.









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